

**ANXIETY AND DEPRESSION AMONG SCHOOL GOING  
ADOLESCENTS IN THANJAVUR: COMPARISONS OF  
ANXIETY ACROSS GENDER, SCHOOL TYPE,  
SOCIAL STRATA AND PERCEPTION OF QUALITY TIME SPENT  
WITH PARENTS**

**Dissertation submitted to**

**THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY**

**In partial fulfilment of the**

**Regulations for the award of the degree of**

**M.D. PSYCHIATRY**

**BRANCH – XVIII**



**Thanjavur Medical College and Hospital**

**The Tamilnadu Dr. M.G.R Medical University**

**Chennai, India**

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## **CERTIFICATE**

This is to certify that this dissertation entitled “**ANXIETY AND DEPRESSION AMONG SCHOOL GOING ADOLESCENTS IN THANJAVUR: COMPARISONS OF ANXIETY ACROSS GENDER, SCHOOL TYPE, SOCIAL STRATA AND PERCEPTION OF QUALITY TIME SPENT WITH PARENTS**” is the bonafide work of Dr. A.R.SHANMUGA PRIYA in partial fulfilment of the requirements for M.D. (Psychiatry) BRANCH-XVIII Examination of The Tamilnadu Dr M.G.R. Medical University to be held in APRIL-2016. The period of study was from November-2014 to August-2015.

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## **DECLARATION**

I solemnly declare that this Dissertation “**ANXIETY AND DEPRESSION AMONG SCHOOL GOING ADOLESCENTS IN THANJAVUR: COMPARISONS OF ANXIETY ACROSS GENDER, SCHOOL TYPE, SOCIAL STRATA AND PERCEPTION OF QUALITY TIME SPENT WITH PARENTS**” was done by me in the Department of Psychiatry, Thanjavur Medical College, and Hospital, Thanjavur under the Guidance and Supervision of my **Prof Dr. S. Ilangovan M.D. Psychiatry**, Department of Psychiatry, Thanjavur Medical College, Thanjavur between 2013 and 2016.

This Dissertation is submitted to The Tamilnadu Dr. M.G.R Medical University , Chennai in partial fulfilment of University requirements for the award of M.D Degree (Branch – XVIII) in Psychiatry.

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## INSTITUTIONAL ETHICAL COMMITTEE CERTIFICATE

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submitted by Dr. A.R. SHANMUGAPRIYA of

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Dated : 10.04.2015



Secretary  
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### I. INTRODUCTION

We humans think of ourselves as rational beings and hope that we are satisfying our motives in an intelligent way. We can do that up to a certain extent, but are more emotional than we often realise. Emotions can cause good and deleterious effects at the same time but are the essential characteristics of mankind. Joy and sorrow, excitement and disappointment, attraction and repulsion, hope and dismay, anxious and cool are some of the feelings we experience in our day to day life. Mood is defined as the persistent and sustained feeling tone that determines one's behaviour and colours his or her perception of the world. Human mind is composed of a mixture of almost all emotions and one's behaviour is determined by the proportion of emotions and the way in which they are expressed. As far as the emotions are in correct proportion and not exceeding limit, there will be no observable disorder.

Anxiety is one among the different kinds of emotion which is needed, to some extent for our wellbeing. When in excess it becomes a disorder. The two components of anxiety are the awareness of one's own physiological sensations and aware of being nervous.

Sad mood is common in day to day life but if it is pervasive and affects a person's social life and achievements it becomes a disorder. When accompanied by other parameters defined by International Classification of Diseases-10 (ICD 10), it becomes Depressive disorder.

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## **ABSTRACT FOR DISSERTATION**

### **“ANXIETY AND DEPRESSION AMONG SCHOOL GOING ADOLESCENTS IN THANJAVUR: COMPARISONS OF ANXIETY ACROSS GENDER, SCHOOL TYPE, SOCIAL STRATA AND PERCEPTION OF QUALITY TIME SPENT WITH PARENTS”**

**1. INTRODUCTION:** Emotions can cause good and deleterious effects at the same time but are the essential characteristics of mankind. Anxiety is one among the different kinds of emotion which is needed, to some extent for our wellbeing. When in excess it becomes a disorder. Sad mood is common in day to day life but if it is pervasive and affects a person's social life and achievements it becomes a disorder. Although anxiety disorders and depression have been reported to be highly prevalent in Adolescent period (13 to 19 years), only a few studies are available. In South India, studies specifically designed to compare anxiety across gender and quality time spent with parents is scarce.

**2. AIMS AND OBJECTIVES:** 1.To assess the prevalence of anxiety and depression among school going adolescents in Thanjavur.2.To compare anxiety across gender, type of School, socio economic background, mother's employment and perception of quality time spent with parents.

**3.HYPOTHESIS :** Prevalence of Anxiety and Depression are high among adolescents. There is significant difference in the prevalence of anxiety when

compared across gender, medium of instruction, socio-economic status, and mothers' employment status as independent variables.

**4. MATERIALS AND METHODS:** This study was done as a cross-sectional study. **Inclusion Criteria:** All students both boys and girls (Age-13 to 17 years) who gave consent to participate in the study. **Exclusion Criteria:** Those Adolescents having concurrent medical illnesses and other disabilities.

**Operational design:** 391 Adolescent School going children fulfilling inclusion criteria were selected by simple random sampling method. They have given the following questionnaires. 1. Semi structured questionnaire to assess the socio demographic profile of the participant. 2. Screen for Child Anxiety Related Disorders (SCARED)-youth version. 3. Beck's Depression inventory-II. Adolescent version. **Statistical Analysis:** Data collected were analysed statistically. Descriptive statistics was used for measures of central tendency and dispersions. Chi-square test was used for verification hypothesis.

**5. RESULTS:** The sample comprised of 391 adolescents. They fall under the following ages of 13, 14, 15, 16, and 17 years. The sample comprised of 47.8% boys and 52.2% of girls. The prevalence of anxiety among the observed adolescents is found to be 29.9% .The prevalence of depression among the observed adolescents is 14.3%. On comparing the prevalence of anxiety across various parameters, the following shows statistically significant difference, girls have more anxiety than boys ( $p=0.000 < 0.05$  statistically significant), Tamil

medium students were more anxious than English medium students( $p=0.001<0.05$  statistically significant),Anxiety among middle socio-economic class is more than other classes compared, Anxiety of adolescents with father studied up to primary level ( $p=0.045<0.05$  statistically significant) and mothers studied up to primary level ( $p= 0.005<0.05$  statistically significant) are more than other educational levels and illiterates. Anxiety across adolescents with working and non- working mothers and also other parameters did not show any statistically significant difference.

## 6. DISCUSSION:

S.no	Particulars Observed	This Study	Other Studies	Inference
1	Prevalence of Anxiety	29.9%	Chandrasekhara & Reddy et al 1998:Neurotic disorders=18.7% to 22.7% Deb & Chatterjee et al: Anxiety among Boys=21% Nerv mrnt et al 2000: anxiety in students with mean age 19 years=24.4%	Comparable
2	Prevalence of Depression	14.3%	Malhotra et al 2007: affective disorders to be up to 13.49% (0 to 14 years) Bansal et al 2009 depression to be around 18.9%. NervMent Dis 2010 et al Depression to be around 18.5% in students with mean age of 19 years	Comparable
3.	Anxiety across Gender	Girls more than boys	Campbell and Ropa et al 1994 and Costello Egger and Angold et al: Girls more than boys	Comparable

4.	Anxiety across Medium of Instruction	Tamil medium more than English medium	Deb and Chatterjee et al 2010: Bengali medium more than English medium	Comparable
5.	Anxiety across Socio economic status	Upper middle class more than other classes(not statistically significant)	Deb et al 2010: high in the middle class	Comparable

**7. CONCLUSION:** The Prevalence of anxiety in the school going adolescents observed in this study is 29.9 %.The anxiety observed is more among girls than boys, is more among the middle socio economic class than lower and upper class, did not show any statistically significant difference when compared between working and non-working mothers. The prevalence of depression among the school going adolescents recruited in this study is found to be 14.3%.Further studies are needed in this area to support the findings observed in this study.

**Key words: Anxiety, Depression, Adolescents, Indian research, prevalence of mental disorders**

## **1. INTRODUCTION**

We humans think of ourselves as rational beings and hope that we are satisfying our motives in an intelligent way. We can do that up to a certain extent, but are more emotional than we often realise. Emotions can cause good and deleterious effects at the same time but are the essential characteristics of mankind. Joy and sorrow, excitement and disappointment, attraction and repulsion, hope and dismay, anxious and cool are some of the feelings we experience in our day to day life. Mood is defined as the persistent and sustained feeling tone that determines one's behaviour and colours his or her perception of the world. Human mind is composed of a mixture of almost all emotions and one's behaviour is determined by the proportion of emotions and the way in which they are expressed. As far as the emotions are in correct proportion and not exceeding limit, there will be no observable disorder.

Anxiety is one among the different kinds of emotion which is needed, to some extent for our wellbeing. When in excess it becomes a disorder. The two components of anxiety are the awareness of one's own physiological sensations and aware of being nervous.

Sad mood is common in day to day life but if it is pervasive and affect a person's social life and achievements it becomes a disorder. When accompanied by other parameters defined by International Classification of Diseases-10 (ICD 10), it becomes Depressive disorder.

Anxiety and Depression are the two important disorders leading to significant suffering, dysfunction and economic burden. Women are reported to have more anxiety disorders than men (19.2 percent prevalence in men and 30.5 percent in women) .The prevalence of major depression is two times more common in women than men. (Kaplan and Sadocks synopsis of Psychiatry 11<sup>th</sup> edition).

### **Adolescence:**

Adolescent period includes age from 13 to 19 years. Adolescent period is stressful for children, and their parents. It can impose stress on all people who associate with them. Studies done in India, report a high level of stress and higher rates of deliberate self-harm among the school going children. Recent studies indicate that there is relation between suicidal ideas and stress in school going children. There is increased risk of substance use in adolescents with stress. Stress is linearly related to maladaptive behaviours of students towards parents, teachers and schools. Stress is one of the important risk factors for the development and manifestation of many psychiatric illnesses, important being anxiety and depression.

**Adolescent population:**

The number of individuals aged 10 -19 years is around 1.2 billion in the World. In the World's population, adolescents constitute more than one fifth of the total. National population of adolescents is found to be the largest in India- 243 million, china has the next highest number -207 million, United States has around 44 million of adolescents. Pakistan and Indonesia both have around 41 million of adolescent population. (World Population prospects report 2008).

Of the total population in India, Adolescents constitute 21 percent. It is difficult for them to exercise their basic needs when compared with adults and makes us to think to give special care and attention to this age group. (Raoetal J Public Health Med. 2001).

**Relevance and purpose of the study:**

Adolescent population constitutes a significant proportion in the society. Anxiety and depression account for noticeable morbidity in this age group. When identified early and intervened in the correct time, the quality of life of the future generation will be markedly improved. This warrants the need for research in this area particularly in this age group.

Although anxiety disorders and depression have been reported to be highly prevalent, only a few studies have examined the prevalence of anxiety and depression among school going adolescents. In South India, studies

specifically designed to compare anxiety across gender and quality time spent with parents is scarce.

Considering all these issues a study has been conducted among the school going adolescents at various schools in the city of Thanjavur to measure the prevalence of anxiety and depression among them. Prevalence of anxiety across various parameters has been compared.



## **2. AIMS AND OBJECTIVES**

1. To assess the prevalence of anxiety in school going adolescents.
2. To compare anxiety across the following parameters.
  - a) Gender
  - b) Type of school-Tamil or English medium
  - c) Socio-economic background
  - d) Mother's employment
  - e) Perception of quality time spent with parents
3. To assess the prevalence of depression in the school going adolescents.

### **3. HYPOTHESIS**

The following hypotheses are going to be verified.

- There is significant difference in anxiety between boys and girls irrespective of the medium in which they are studying, socio-economic status, and occupational status of the mother.
- There is significant difference in anxiety among adolescents getting educated in different mediums of study, irrespective of socio-economic status, occupational status of the mother and gender.
- There is significant difference in anxiety between students belonging to different socio-economic status, irrespective of the medium in which they are studying, mothers' employment status and gender.
- There is significant difference in anxiety among students having employed and unemployed mothers irrespective of the medium in which they are studying, gender and socio-economic status.

# *REVIEW OF LITERATURE*

## **4. REVIEW OF LITERATURE**

When analysed, it is found that various studies have been done to measure the prevalence of anxiety and depression in school going children. The basic definitions, types and clinical features of anxiety and depression are going to be discussed. Then various studies on this area are reviewed.

### **Part I: Anxiety and Depression- Basics**

**Part II:** Various studies on anxiety in general, anxiety among children, other mental disorders in children, anxiety among elderly, depression, depression in children, role of parenting in adolescent health, role of gender differences in anxiety, assessment of socio economic status are reviewed.

### **4.1. Anxiety:**

Anxiety is felt as an unpleasant, unexplained sense of apprehension, and is accompanied by symptoms like head ache, chest tightness, etc.

#### **a) Fear and Anxiety:**

Fear is an alerting signal that occurs in response to definite threat, whereas, anxiety occurs in response to unknown threat.

The main distinction between the anxiety and fear is insidiousness of anxiety and suddenness of fear. They are the innate alerting signals which warn a person during internal or external threat.

Anxiety can be defined as a normal response and prevents damage to a person by alerting him or her to do certain acts that help to face a given stressful situation.

**b) Stress Vs Anxiety:**

Nature of event, resources available in the person, defences used by him or her, the person's coping mechanisms all determine whether a particular event is perceived as stressful or not.

**c) Theories regarding Anxiety:**

**Psycho analytic theories:**

It was believed by Freud that anxiety actually stemmed from the basic libido. He then defined it as a signal to danger in the unconscious mind. Psychic conflict between unconscious aggressive or sexual wishes and threats arising from super ego or reality were proposed to be the reason for anxiety.

**Behavioural concepts:**

Behavioural theories postulate anxiety as a type of conditioned response to specific external cue. Model of social learning states that a child develops an anxiety response by imitating the same from the surrounding e.g. an anxious parent.

**Existential concepts:**

This concept regarding anxiety contributes models for anxiety in general, where no identifiable stimulus exists for the development of anxiety.

**d) Neurotransmitters and Anxiety:**

Neurotransmitters associated with anxiety are norepinephrine (NE), Serotonin, and Gaba-amino butyric acid (GABA).

Neuropeptide Y and Galanin have also been proposed in the expression of anxiety, fear and depression.

**e) Anxiety disorders:**

Anxiety is the word derived from the language Latin -“Anxietas”. When exceeds limit, it destabilises the individual. It is said to be pathological when it occurs in the absence of stress, when occurs in disproportion to the stress present, and when it causes significant impairment.

**f) Childhood and adolescence Anxiety disorders:**

Anxiety disorders commonly found in youth are anxiety disorder in general, anxiety due to separation, selective mutism and others. They are further classified into different types by the way of experience that triggers it and the course that follows. Separation anxiety disorder , social anxiety disorder , generalised anxiety disorder are usually considered together in evaluation and differential diagnosis as they are highly comorbid and mostly have overlapping

symptoms. They are distinguished from each other by the types of situations eliciting the anxiety and avoidance behaviours.

**(i) Separation anxiety disorder:**

It is a universal phenomenon in the course of human development that usually emerges during infancy. It marks a child's awareness of separation from his or her primary care giver or mother. It is the one characterized by a level of fear or anxiety regarding separation from their parents or primary care giver which is beyond developmental expectations according to DSM 5. It requires the presence of at least 3 symptoms related to excessive worry about separation from a major attachment figure for a period of at least 4 days.( Diagnostic and Statistical manual of Mental disorders-DSM 5)

**(ii) Generalized anxiety disorder:**

Generalized anxiety disorder leads the children to have significant distress in day to day activities usually focused on the child's fears of incompetence in lot of areas including performance at school and in social settings. Children with generalised anxiety disorder also have at least one of the following symptoms: Restlessness, "mind going blank", easy fatiguability, muscle tension, irritability or sleep disturbance.

### **(iii) Social anxiety disorder:**

Persons who experience intense discomfort and distress in social situations, impaired by their fear of scrutiny or humiliation are diagnosed to be having social anxiety disorder. Their distress may be expressed by crying, avoidance, tantrums, freezing or becoming mute in the anxiety provoking situations. It has significant implications in the future accomplishments as it is characterised by lower levels of satisfaction in play and other leisurely activities, less productivity in the work place, increased rates of school dropout and increased probability of remaining single.

## **4.2 Depression**

Hippocrates used the terms mania and melancholia for describing mental illness. Kingsaul's story of 'Old Testament' and the story of 'Ajax's suicide' in Homer's Iliad described depressive syndrome. Roman physician Celsus described melancholia {from Greek - melan (black) chole (bile)}. The first English text entirely related to depression was Robert Burton's 'Anatomy of melancholi' published in 1621. Jules falret described a phenomenon called foliecirculaire, where patients experience alternative moods of depression and mania. Emil Kraepelin differentiated depressive psychosis from dementia praecox (As Schizophrenia was then called). He also described a type of depression known as involutional melancholia .



A depressive episode is said to be major if symptoms are present for duration of two weeks. Four symptoms from a list including changes in sleep pattern, feeling of guilt, lack of energy and problems in decision making and thinking should be present. Also include repeated thoughts of suicide.

The depressive disorder prevalence in women is more than men. Reasons being hypothesized to involve hormonal differences, child birth effects, difference in the psycho social stresses between men and women.

Mood disorders also called affective disorders are important category of psychiatric disorders consisting of depressive disorder, Bipolar disorder and others. Various adjectives used to describe mood are depressed, empty, melancholic, distressed, irritable, elated, gleeful, disconsolate, and euphoric and others. Disorders of mood can be a continuum with normal variations in mood. Patients suffering from mood disorder usually report an ineffable but distinguished quality to their pathological state. Patients presenting with only depressive episodes are diagnosed to be having unipolar depression or major depression. Patients presenting with both depressive and manic episodes and only manic episodes are diagnosed to be having bipolar disorder. “Unipolar mania and pure mania” are the terms sometimes used for the patients who present with bipolar nature but do not have depressive episodes.

Three other categories of mood disorders are dysthymia, cyclothymia and hypomania. An episode of manic symptoms that does not fulfil the criteria for

manic episode is called hypomanic. Dysthymia and cyclothymia are disorders that represent less severe forms of major depression and bipolar disorder respectively.

## **Part II: Review of studies regarding anxiety and depression:**

### **4.3 Studies regarding Anxiety:**

Anxiety is one of the emotions which predate the evolution of mankind. It is ubiquitous among humans. In the recent years, there is noticeable improvement in nosology, epidemiology, and psycho pathology which led to better understanding of anxiety disorders. Pharmacotherapy and psychotherapy have remarkably advanced and increased hope for symptom relief and improved functioning of patients.

#### **4.3.1 Genetic studies on anxiety disorders**

Genetic studies have shown that there is a role for genetic component for the development of anxiety. Heredity is said to be one of the predisposing factors for anxiety development. When patients with panic disorder are studied, half of them will have an affected relative. There is a higher frequency of anxiety in the first degree relatives of the persons affected in compared with relatives of non affected persons. A linkage is supposed to be there between anxiety and genetics. It has not yet been proved to result from simple Mendelian abnormality.

### **Epidemiological studies:**

Epidemiological studies in rural areas are difficult to be conducted than urban ones, because of ignorance, stigma and lack of resources. Ignorance and attribution of many issues to personality factors may be the reason for omission of problems like obsessive compulsive disorder (Chandrasekara and Reddy)<sup>(1)</sup>

#### **4.3.2. Studies on anxiety disorders among children and adolescents:**

##### **Genetic factors:**

Studies suggested that genes account for about one third of the variance in the development of anxiety disorders. Heritability in children and adolescence as a cause for anxiety disorders varies from 36% to 65%, highest estimate being found in younger children with anxiety disorders. Two important heritable characteristics are behavioural inhibition and physiological hyper arousal – both being found to impart significant risk factors for development of an anxiety disorder in future.

##### **Epidemiological Studies:**

Psychiatric problems in paediatric population have been reported by a study in 1972( Gupta and sethi et al Indian J 1967 & Sethi and Gupta et al Indian J Psychiatry 1972) Those studies did not mention about separate disorders like anxiety.

Another study (Nagaraja et al review Indian J Psychiatry 1966) reported childhood neurosis in 9.7% of out-patient population and 9.3% of the in-patients.

Another study, reported neurotic behaviour in 27.3% of children who were admitted for Physical ailments ( Machanda , Kishore et al Indian Paeditr 1969). In a study conducted in Madras Govt., general Hospital in the 1964-1966 (Raju ,sundaravallietal Indian Paediatr 1969), 592 children were examined. 22 were found to be neurotics and 16 were found to be hysterical.

Nineteen children in the age group of 0 to 12 years were selected from a paediatric in patient clinic. Neurotic disorders were found in a period of 11 months ( Manchanda and Manchanda et al Indian J Psychiatry 1978).

In India, child mental health services have to be strengthened and should be given more importance. On analysing the child population, ten percent are in need of special care and treatment. But only one out of the hundred gets some care and treatment (PriyavadanChandrakantetal-Indian J Psychiatry 2010).We have to reach out to 99% of the child population that is being unattended by any agency.

Neurotic disorders particularly anxiety and depression among school going adolescents are found to be much prevalent. A meta analysis, analysed epidemiological studies thirteen in number from India ( Reddy&Chandrashekara et

al 1998)<sup>(1)</sup>. Neurotic disorders were prevalent in 20.7(18.7 to 22.9) which was the leading type among other disorders.

The common Psychiatric diagnosis in school going students is anxiety disorder when estimated globally. The prevalence rate in overall is 8% ranging from 4 to 25%<sup>(2-4)</sup>. Childhood anxiety is reported to be 18 per thousand per year.<sup>(5)</sup>When school children are concerned only few studies have been done to measure various types of anxiety among them. Puberty is considered to be the vulnerable period for occurrence of anxiety.<sup>(6)</sup>

There is difference in anxiety among girls and boys, during puberty, in terms of anxiety types, severity and different psycho pathologies.

Social phobia, generalised anxiety disorder, panic disorder with agoraphobia, specific phobia and obsessive compulsive disorders are the different types anxiety disorders that could cause significant problems in one's well being)<sup>(7)</sup>

Parents' high expectation regarding childrens' education and compulsion for academic achievement are found be important contributing factors for anxiety in adolescents and school children.(Deb et al 2001).Some other studies reported anxiety prevalence to be 19.3%.( Lal and Setietal 1997 and Deb and Chatterjee et al 2010)

In the year 2000, a study conducted has shown that untreated anxiety can have long and short term deleterious effects in children and adolescents. (Essau CA Conradt et al<sup>(8)</sup>)

An article published in J child psychol psychiatry 1995, has shown lower achievement in academic area in children with anxiety disorders when compared with normal children (Ialango N, Edelsohn g et al<sup>(9)</sup>).

Another article on anxiety and impairment psychosocial areas reveals that children with anxiety might have reduced self-esteem. (Strauss CC, Frame CL et al<sup>(11)</sup>).

A study done on anxiety and interpersonal relationships and adjustment found that children affected with anxiety might face problems with peer and parental relationships<sup>(10, 11)</sup> also poor vocational adjustment (Hibbert a, Fogelman etal<sup>(12)</sup>)

A study on the issues in assessment and intervention regarding children's peer relations has shown that children suffering from anxiety might have negative attitude towards self- perception (Rubin KH etal<sup>(13)</sup> )

Two studies done on mood and anxiety disorders revealed that children with anxiety have greater chance of developing psychiatric disorders in later life.(Rozaetal<sup>(15)</sup> 2003 and Chorpitaetal<sup>(16)</sup>)

Various epidemiological studies <sup>(17)</sup> have shown that anxiety disorders are prevalent in 5-7 % of adolescents and children.

The prevalence of anxiety disorders is found to be 18.2 to 22.7 <sup>(18)</sup> according to a meta-analysis which analysed epidemiological studies in Indian setup. The prevalence rate was found to be 8% ranging from 2 to 24% <sup>(19)</sup> as per a study.

A meta-analysis (Ganguli et al 2000) which analysed fifteen epidemiological studies on psychiatric morbidity in India, reported that prevalence rates (in per thousands) of anxiety neurosis is 16.5. Prevalence of conversion disorder was reported to be 3.3. The results were similar to another popular meta-analysis in the similar area-(Reddy and Chandrasekhara) which was already mentioned in this study. Hysteria was the only disease that was analysed separately. Prevalence of various other anxiety disorders were left behind.

A meta-analysis which analysed 10 Indian studies on Psychiatric disorders ( Madhav et al 2001), reported prevalence rates to be 18.5 for anxiety and 4.1 for hysteria per 1000 population.

Many Indian studies actually neglected anxiety related disorders. Reasons contributing are proposed to be single informant, poor reporting systems and use of less sensitive screening instruments as per previous reports.

Mental health care priorities should be given to common problems like anxiety, depressive disorder, somatoform disorders and others in instead of psychotic disorders. These common problems are associated with more disability.(Patel et al.,)

#### **4.3.3. Prevalence of other mental disorders-children:**

A study on the epidemiology of childhood psychiatric disorders reported that mental disorder prevalence among children to be 14-20%. (Brandenburg NSA, Friedman RM et al <sup>(20)</sup>)

According to World Health Report <sup>(21)</sup> (2000), it has been found that 20% of adolescents and children suffer from one or the other disabling mental disorder globally.

According to WHO report <sup>(22)</sup> 2001, suicide is found to be the third leading cause of death among adolescents. The problem of childhood psychiatric morbidity is more serious in middle and low income group and is more prevalent in those countries which have a larger portion of child and adolescent population, lower levels of health indices, suboptimal infra-structure and resources to deal with the arising problems.

Recently several population studies have given fairly reasonable estimate on the prevalence of child and adolescent mental disorders (CAMD) in middle and low economic countries. The reported rates are 17.7% in 1-15 years old in



Ethiopia <sup>(23)</sup>.15% among 5-10 years olds in Bangladesh<sup>(24)</sup>.12.7% among 7-14 years olds in urban Brazilian school <sup>(25)</sup> 7% among 7-14 years of rural Brazilian school<sup>(26)</sup> & 6.9% among 4-17 years in Puerto Rican community sample <sup>(27)</sup>.

The prevalence rates in community based studies in the following places revealed anxiety percentage as follows:

Sl.No	Place	Age	Percentage
1.	Bangalore <sup>(28)</sup>	0-16	12.5
2.	Kerala <sup>(29)</sup>	8-12	9.4
3.	Chandigarh <sup>(30)</sup>	4-11	6.3

Overall rates of CAMD in India and other middle and low income countries are between 6-15% which are on the lower side compared to certain western countries like Canada-18.8%<sup>(31)</sup>, Germany 20.7% <sup>(32)</sup>, Switzerland-22.5% <sup>(33)</sup>, USA 21% <sup>(34)</sup>.

#### **4.3.4. Studies on Anxiety disorders among elderly:**

Data on anxiety disorders among special population are scanty. A study done on geriatric population, selected elderly subjects 488 in number. Anxiety neurosis was found in 9% of persons who were diagnosed with ICD 9 diagnostic criteria. (Tiwari and Srivastava et al Indian j Psychiatry 1998)

#### **4.4.1. Depression studies:**

A study done in Chennai used Patients health questioner (PHQ12) to estimate the levels of depression. It screened around 24000 persons. Prevalence of depression was found to be 15 percent after adjusting for age <sup>(35)</sup>. After a period of 20 years another study was done in the same area. That study found an increased prevalence rate of depression from 49.93 per 1000 persons up to 73.97 per 1000 persons <sup>(36)</sup>. Prevalence rates were found to be 21- 40.45 percent<sup>(33-40)</sup> by studies conducted in primary care centres. Some other studies found that among the persons attending outpatient clinics, 5-26.7% were found to have depression<sup>(41-44)</sup>.

#### **4.4.2. Childhood depression studies:**

The prevalence rate depression was found to be 0.1% when observed between 4-16 years <sup>(45)</sup>. Another study reported the incidence of depression among children as 1.61 per 1000 per year <sup>(46)</sup> that study was conducted in North India.

Few decades before, Physicians did not concentrate on existence of significant depressive illness in children. Recent evidences have confirmed that significant problems exist in children and adolescents in relation to mood disorders. The diagnosis in treatment of depression is sub optimal in the primary level in spite of the increased prevalence and subsequent consequences of the

same. About 30-50% of patients with depression are missed by primary care level physicians (Simm & vonKoff 1995). Undiagnosed depressive patients cannot be treated properly. Systematic screening procedure should be applied to improve diagnosis, management and prognosis of depression.

Paediatric recognition of depression will not be enough to change patient's prognosis. Teenagers suffering from depression should be recognised as a first step to improve management of depression. 5-8% of adolescents and 2% of pre pubertal age group are affected by depression. A study by Son and Kirchner 2000 showed that spectrum of depressive disorder range from simple sad mood to major depressive disorder or bipolar illness. A study (Zuckerbrot and Jensen, 2006) as shown that at a given time the percentages of teenagers who fulfil the criteria for depression is found to be 3-9 percent. Around 20% teenagers fulfil the same as they complete their adolescent period.

The responses in depressed children can range from simple sad mood to clinical depression with severe impairment associated with or without manic symptoms (Wolraich et al 1996, Kovacs et al 1994, Wellet et al 1996).

Studies have shown that prevalence of depression among school going children and adolescents is higher than expected. Depression in the adolescent age group can impair the teenager's socialization, relationship with families, school performance also significant long term complications. Children affected with depression are at a higher risk for hospital admissions, repeated episodes of

depression, impairment in psycho-social area, substance abuse and anti-social behaviours when they grow.

Studies done at clinical level have shown that 1.2-9.2% were affected with mood disorders, unipolar depression being the commonest type observed<sup>(47-52)</sup>.

The prevalence of mood disorders was found to be more in paediatric population attending out-patient clinic from 2 to 13.4% <sup>(53)</sup>

#### **4.5. Role of parenting:**

When factors contributing to anxiety are analysed parenting pattern is found to be important. A study on anxiety on school children which compared the role of parenting state that authoritarian parenting type was found to be significantly associated with high levels of anxiety in school students. (Ajay Kumar Bakhlaetal <sup>(54)</sup>).

Few constructs associated with levels of anxiety in children include parental control <sup>(55-57)</sup>, parental neglect, hostility towards the child, aggressive behaviours, reduced affection, lack of approval, and reduced responsiveness <sup>(58-59)</sup> . The above mentioned constructs are unique to each child and differentiated according to the gender that child belongs to. The different types parenting style include democratic, permissive and authoritarian, which leads to different levels

of parental control. Authoritarian type of parenting will be restrictive, harsh and control autonomy of the child.

The reports from various socio-cultural settings differ significantly<sup>(63-65)</sup>. So the impact of parenting type on childrens' anxiety cannot be explained clearly. Prevalence studies of anxiety include Lal and Setietal<sup>(66)</sup>, Deb etal<sup>(62)</sup> which reported prevalence rate of 19.13%.

#### **4.6. Role of gender difference:**

Gender affects anxiety in childhood along with genetic and other environmental factors. Studies from many English speaking countries have shown the association of gender difference and anxiety. Girls usually develop more anxiety and related disorders than boys. Girls in adolescent age group were found to have more worries and increased separation anxiety. They also show more incidents of generalized anxiety<sup>(60-61)</sup>.

The prevalence of anxiety was found to be higher (20.1%) in boys and lower in girls (17.9%) . This difference was found to be statistically significant<sup>(62)</sup> . Both biological and environmental factors contribute to the difference in anxiety prevalence among genders<sup>(67)</sup>. Other factors contributing to the varying prevalence of anxiety among genders include differing gender roles, different social relationships and socialization process<sup>(68)</sup>.

Lewinsohnetal<sup>(69)</sup> has shown that gender difference in anxiety is not eliminated by fifteen variables studied. Some of them are self competence, self esteem, life events, skills for coping, family support, friends support etc.,

#### **4.7. Studies regarding assessment of socio economic status:**

Community based studies usually focus on socio economic status. It is one of the factors to understand a persons' affordability to health services and capability of purchasing. When education, occupation and income details are taken as a summation for assessment of socio economic status, it reflects the value system expected to that level of education and occupation. Income is usually in alignment with the standard of living. Socio economic status is an important factor that determines health. Kuppusamy's socio economic status is a reliable scale to measure socio-economic status – originally formulated in 1976<sup>(70)</sup>. Income groups of family for 1976 were based on 1960 as 100 (base)<sup>(71)</sup> according to Kuppusamy's original scale. A study was conducted in 2012 to update Kuppusamy's scale to be used in the current era-(BP Ravikumar et al<sup>(72)</sup>). This study was an attempt to update Kuppusamy scale. The method to obtain current income groups was then revised by using 218 as current price index.

In another study, The World Bank used house hold items to measure socio-economic level and the impact it produces on health care<sup>(73,74)</sup>. Well-being ranking analysis is a technique for the quick collection and analysis of particular data or social strata in the community<sup>(74)</sup>.

One more study, compared the performance of Kuppusamy Scale and Reference Income scale ( A.B.Pateletal<sup>(75)</sup>). Another scale for measuring socio-economic status is Reference Income Scale<sup>(76)</sup>. Social structures and the ability of a person to participate in and influence the living society determines his health status<sup>(77)</sup>. Those studies mention that higher standards of living and better living conditions lower the disease prevalence leading to better utilisation of health services. Thus health status is better indicated by standard of living.

A person is said to be poor if he or she cannot get the minimum income to meet basic needs and consumes things below the minimal level of standard<sup>(78)</sup>.

An instrument has been developed by (Agarwaletal<sup>(79)</sup>). It contained 22 items to measure different socio-economic status. It can measure the socio-economic status of both urban and rural populations. The limitation of the scale is it is not suitable for quick assessment in community level.

# *MATERIALS AND METHODS*



## **5. MATERIALS AND METHODS**

### **5.1. Setting:**

The study was conducted in various schools located in the city of Thanjavur-Tamilnadu. Tamil medium schools and English medium schools attached to government, semi-government and private sector were chosen.

### **5.2. Period of study:**

The study was done for duration of 10 months from November 2014 - August 2015.

### **5.3. Study design:**

The study was done as a cross-sectional study.

#### **5.3.1. Inclusion criteria:**

- a) Girls and boys studying in a class.
- b) Adolescents fulfilling the age criteria of 13 to 17 years.
- c) Adolescents studying in IX and XI standard are included.
- c) Adolescents who themselves and their parents gave willing consent to participate in the study

### **5.3.2. Exclusion criteria:**

- a) Adolescents with concurrent medical illnesses or other dis-abilities are excluded from the study.
- b) Adolescents and their parents who did not give consent to participate in the study are excluded.

### **5.3.3. Operational design:**

As first step study protocol was submitted to the Institutional ethical committee, Thanjavur Medical College, Thanjavur and obtained permission to start the study planned.

Secondly, opinions from senior persons were obtained regarding number and locality of schools around the Thanjavur city. Some Tamil and English medium schools were randomly selected. While selecting, attention was taken to include schools affiliated to government, semi-government and private sector.

**Sample size:** After analysing the previous studies, prevalence of anxiety among school going adolescents and parent article of this study sample size was planned to be around 400. This included 200 girls and 200 boys, 50 each belonging to Tamil and English medium schools, 50 each belonging to IX and XI standard respectively.

Heads of the corresponding schools were met and permission obtained to conduct the study, dates and time to meet the school children for giving and collecting questionnaire were programmed. According to the schedule, adolescents around 20 in number were met each day-3 days in a week excluding Saturdays and Sundays till the desired sample size is met.

Next, on the scheduled dates students were met. Purpose of study was explained to them. Inclusion and exclusion criteria were applied. After explaining that there will be no direct or immediate benefit to them following this study, questionnaires with study number were issued to them. Those who are willing to participate were asked to fill up the given questionnaire. Questionnaires given were self-rated type and students were asked to fill themselves. However, some students felt difficult to understand few questions. Their doubts were cleared individually. After giving adequate time filled up questionnaires were collected back.

**Tools used in the study:**

1. Semi structured proforma
2. Wealth Index Scale (WIS)
3. Screen for Child Anxiety Related Disorder (SCARED).
4. Beck Depression Inventory 2 for adolescents (BDI 2).

#### **5.4.1. Semi structured proforma :( Appendix 1)**

The semi structured proforma is designed to know about the socio demographic profile of the study participant. It includes the participant's age, sex, standard in which he or she is studying, medium of instruction (Tamil or English) and family type (nuclear or joint). Parental profile includes father and mother's age, educational status and occupation details. It measures the socio economic status of the participant by using Wealth Index Scale. It also measures whether their parents spend quality time with them and their feel of comfort to share personal issues with them. **(Tamil Version Appendix 4)**

#### **5.4.2. Wealth Index Scale (WIS) (Appendix 1)**

Only very few scales are available so far to assess socio economic status of an individual. Many details are required and data have to be analysed widely and correctly to assess the same. To overcome these difficulties some rapidly assessing tools are now available. One among those is the Wealth Index Scale. This is a scale to assess the availability of certain things at home indicating wealth of a person in turn denoting that individual's socio economic status.(The Indian Journal of Paediatrics (Impact Factor: 0.72). 05/2007). The agreement between Owner ship Scale( WI) and KUP (Kuppusamy Scale) was 55.56%.

KUP scale is a lengthy one it is difficult to be administered by paediatric students. It is biased towards qualifications and education and measuring actual

standard of living becomes difficult. A simple 8 item ownership scale (WI) can be used in the place of KUP, Which shows reasonable agreement with KUP.

The scale contains a list of 8 items. Electricity is denoted essential item (E). Radio, television, bicycle, scooter and land are denoted as useful items (U). Car and refrigerator are denoted as non-essential items (NE). A person is said to belong to “lower” if the family did not have current supply (E), “Upper low” class if they had current supply and fewer than 2 useful items but no Non-Essential items, “Low middle” if they had current supply in addition to 2 or more useful items but no non essential items (NE). They are said to belong to “Upper middle” if they had 2 or more useful items U and one non-essential item, “Upper class” if they had essential items, all useful items and all non-essential items.

A recent article states that this scale can be used by health personals and others to measure socio-economic status ( A.B. Patel et al – Indian Journal of Paediatrics -2007).

#### **5.4.3. Screen for Child Anxiety Related Disorders (SCARED) (Appendix 2)**

Article published by Russel and Sushila et al in Expert Scape with evidence from studies conducted from 2004 to 2014 validated this measure for identifying Anxiety Disorder (AD) among adolescents in an Indian community context. The test re-test reliability for the scale is found to be good (ICC=0.90). This scale shows good internal consistency (Cronbach’s alpha=.89). This sale is

found to have enough psychometric properties. It is available for clinical and research in India.

Screen for Child Anxiety Related Disorders (SCARED) Youth Version is used in this study. It contains 41 questions to screen the presence of anxiety disorder and also to subtype different types of anxiety such as Panic disorder or significant somatic symptoms, Generalised Anxiety Disorder, Separation Anxiety Disorder, Social Anxiety Disorder and Significant school avoidance.

Scores are given according to the response as below.

Sl.No	Score	Inference
1.	0	Not true or hardly ever true.
2.	1	somewhat true or sometimes true
3.	2	Very true or very often true

Anxiety disorder is diagnosed when total score is more than or equal to 25. Scores more than 30 are more significant.

Question No.	Score	Inference
1, 6, 9, 12, 15, 18, 19, 22, 24, 27, 30, 34, 38	7	Panic Disorder or significant somatic symptoms
5, 7, 14, 21, 23, 28, 33, 35, 37	9	Generalized Anxiety Disorder.
4, 8, 13, 16, 20, 25, 29, 31	5	Separation Anxiety.
3, 10, 26, 32, 39, 40, 41	8	Social Anxiety Disorder.
2, 11, 17, 36	3	school avoidance

Validated Tamil version of this Scale is given to the Tamil medium students participated in this study. (**Appendix 5**)

#### **5.4.4. Beck Depression Inventory 2 (BDI 2) :( Appendix 3)**

Kathrin et al article published in Psychiatry Research journal in December 2012 validated this scale.

The Beck Depression Inventory- (BDI-II) is an indicator to find out the presence of depression and its severity in patients from age 13. It can differentiate four types of severity but cannot classify the patients as depressed or non- depressed.

Screening cut-off score as per Youden's Index **was**  $\geq 23$ . The sensitivity was found to be 0.88 and specificity was found to be 0.92. Findings

indicate that the BDI-II can be applied to screen for depressive disorders in adolescents.

Scores are measured according to the responses as 0, 1,2 and 3.Total scores are interpreted as follows.

<b>Scores</b>	<b>Type of depression</b>
1-10	Normal
11-16	Mild mood disturbance
17-20	Borderline clinical depression
21-30	Moderate depression
31-40	Severe depression
Over 40	Extreme depression

Validated Tamil version of the same scale is given to the Tamil medium students participated in the study. (**Appendix 6**)

#### **5.4.5. Statistical Analysis:**

Data collected were analysed statistically. Descriptive statistics was used for measures of central tendency and dispersions. Chi-square test was used for verification hypothesis.



# *RESULTS AND OBSERVATIONS*

## **6. RESULTS AND OBSERVATIONS**

The study is a cross sectional study designed to measure the prevalence of anxiety disorders and depression in school going adolescents and anxiety is compared across various parameters.

### **Socio- demographic data:**

Socio demographic data were analysed under the following areas

1. Age distribution of the participants.
2. Sex distribution of the participants.
3. Standard in which the participants are studying in.
4. Medium of Instruction.
5. Family type.
6. Parental profile
  - a) Father's educational status.
  - b) Father's nature of work.
  - c) Quality time spent by father.
  - d) Mother's educational status.
  - e) Mother's nature of work.
  - f) Quality time spent by mother.
  - g) Both parents spending time with the participant.

h) Comfortability of the participant to share personal issues with parents.

7. Socio economic status.

**Prevalence and comparison data:**

1. Prevalence of Anxiety
2. Comparing Anxiety across gender
3. Comparing anxiety across medium of instruction
4. Comparing anxiety across socio economic background
5. Comparing anxiety across working and non-working mothers

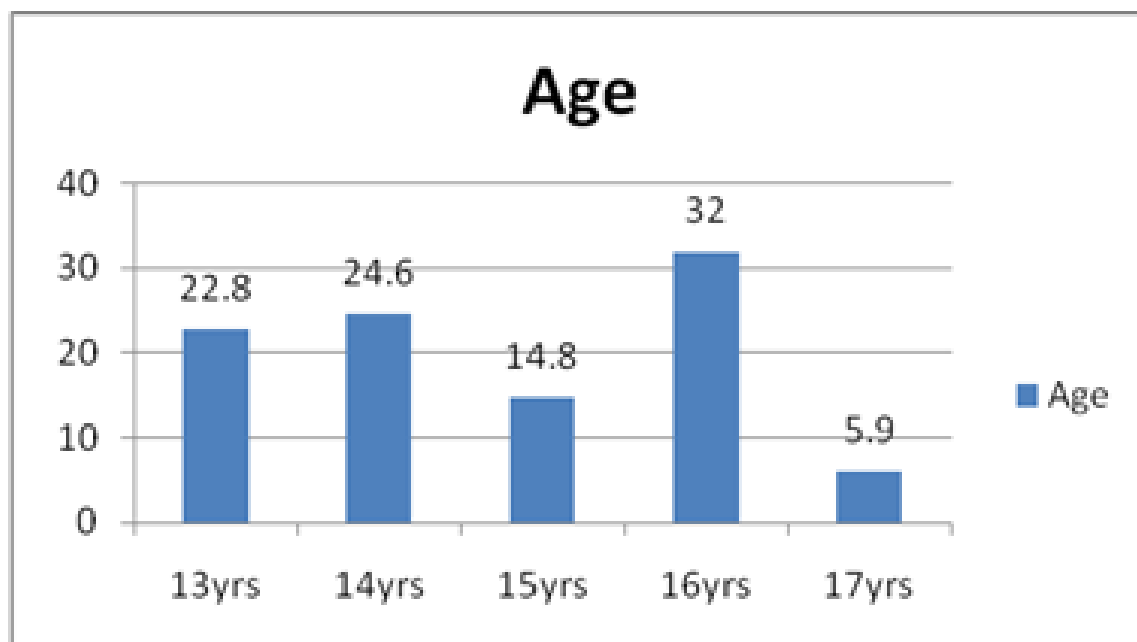
**AGE DISTRIBUTION:**

The sample comprised of 391 adolescents. They fall under the following ages of 13, 14, 15, 16, and 17 years.

**TABLE 1.1. Age Distribution**

<b>Particulars</b>	<b>Frequency (n=391)</b>	<b>Percentage (100%)</b>
13yrs	89	22.8
14yrs	96	24.6
15yrs	58	14.8
16yrs	125	32.0
17yrs	23	5.9

**FIGURE 1.**



**TABLE 1.2. Anxiety and Age of participants**

Age	Anxiety						Statistical inference
	No		Yes		Total		
	( <i>n=274</i> )	( <i>100%</i> )	( <i>n=117</i> )	( <i>100%</i> )	( <i>n=391</i> )	( <i>100%</i> )	
13	59	21.5%	30	25.6%	89	22.8%	.284>0.05  Not Significant
14	71	25.9%	25	21.4%	96	24.6%	
15	35	12.8%	23	19.7%	58	14.8%	
16	93	33.9%	32	27.4%	125	32.0%	
17	16	5.8%	7	6.0%	23	5.9%	

As far as age is concerned, the prevalence of anxiety is 25.6% in 13yrs age, 21.4% in 14yrs, 19.7% in 15yrs, 27.4%in 16yrs and 6%in 17yrs.It appears anxiety is more among 16 years, this difference is not statistically significant.

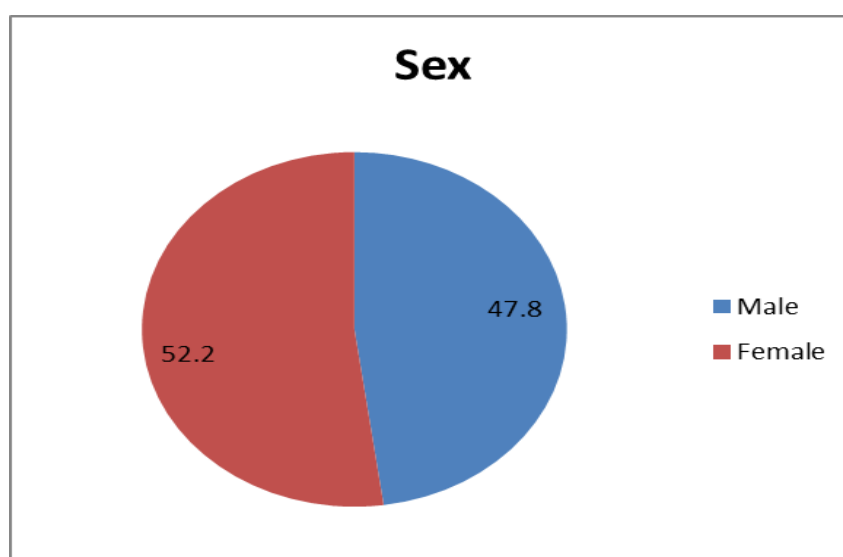
## SEX DISTRIBUTION:

The sample comprised of 47.8% (n=187) boys and 52.2% (n=204) of girls.

**TABLE 2.1. Sex Distribution**

Particulars	Frequency (n=391)	Percentage (100%)
Boys	187	47.80
Girls	204	52.20

**FIGURE 2.**



**TABLE 2.2. Anxiety and gender of participants**

sex	Anxiety						Statistical inference
	No		Yes		Total		
	(n=274)	(100%)	(n=117)	(100%)	(n=391)	(100%)	
Male	157	57.3%	30	25.6%	187	47.8%	X <sup>2</sup> =32.932 Df=1
Female	117	42.7%	87	74.4%	204	52.2%	
							.000<0.05 Significant

The prevalence of anxiety among girls is 74.4% and boys is 25.6% when anxiety is compared across gender, girls have more anxiety than boys. This finding is similar to other studies like Campbell and Ropa et al 1994 and Costello Egger and Angold et al 2003 which also showed that anxiety is more prevalent among girls than boys.

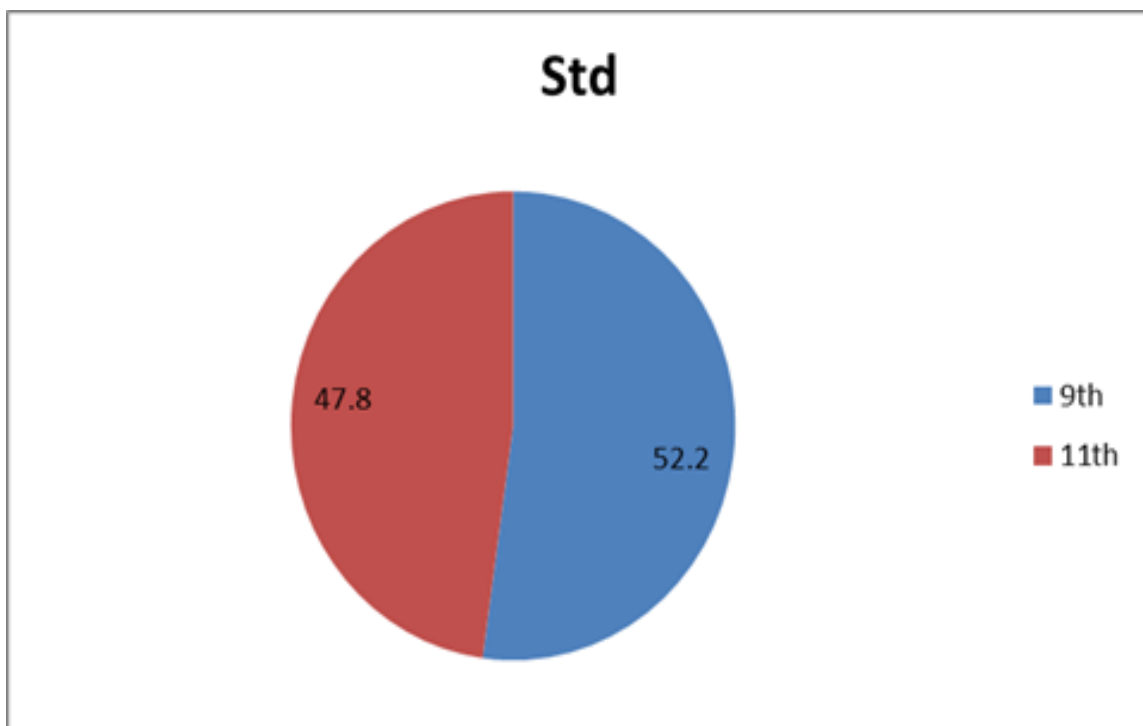
### **PARTICIPANT'S STANDARD AT SCHOOL:**

The adolescents participated were from class IX and class XI. IX standard students' constituted 52.2% and XI standard students constituted 47.8 %.

**TABLE 3.1.STANDARD**

Particulars	Frequency (n=391)	Percentage (100%)
9	204	52.2
11	187	47.8

**FIGURE 3.**





**TABLE 3.2. Anxiety and standard of study**

Std	Anxiety						Statistical inference
	No		Yes		Total		
	(n=274)	(100%)	(n=117)	(100%)	(n=391)	(100%)	
9	145	52.9%	59	50.4%	204	52.2%	X <sup>2</sup> =.204 Df=1  .651>0.05  Not Significant
11	129	47.1%	58	49.6%	187	47.8%	

The prevalence of anxiety in IX standard students is 50.4% and XI standard students is 49.6% On comparing anxiety among the standards in which students are studying, no statistically significant difference is observed.

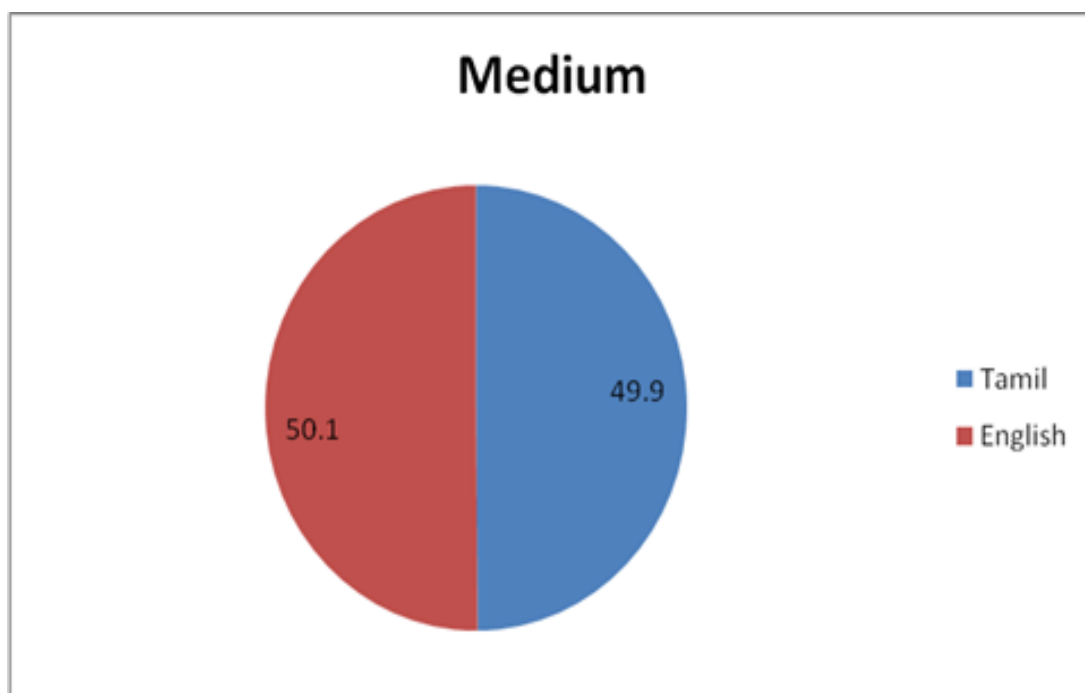
## MEDIUM OF INSTRUCTION:

In terms of medium of instruction the sample contained 49.90 % (n=195) of Tamil medium students and 50.0% (n=196) of English medium students.

**TABLE 4.1. Medium of Instruction**

Particulars	Frequency (n=391)	Percentage (100%)
Tamil	195	49.90
English	196	50.10

**FIGURE 4.**



**TABLE 4.2. Anxiety between Tamil & English medium students**

medium	Anxiety						Statistical inference
	No		Yes		Total		
	(n=274)	(100%)	(n=117)	(100%)	(n=391)	(100%)	
Tamil	121	44.2%	74	63.2%	195	49.9%	X <sup>2</sup> =11.948 Df=1 .001<0.05 Significant
English	153	55.8%	43	36.8%	196	50.1%	

As far as the medium of instruction is concerned, Tamil medium students constituted 49.9% and English medium students constituted 50.1% in this sample. When compared among medium of instruction, Anxiety in Tamil medium students is 63.2% and English medium students is 36.8%. Anxiety among Tamil ( i.e. the regional language in this area) medium students is found to be more than the English medium students. The p value observed is  $0.001 < 0.05$ , which is statistically significant. This finding is in consistent with another study (Deb and Chatterjee et al 2010) which compared Bengali medium students with English medium students and showed that children learning through Bengali (regional language) medium school were more anxious than their English medium counterparts.

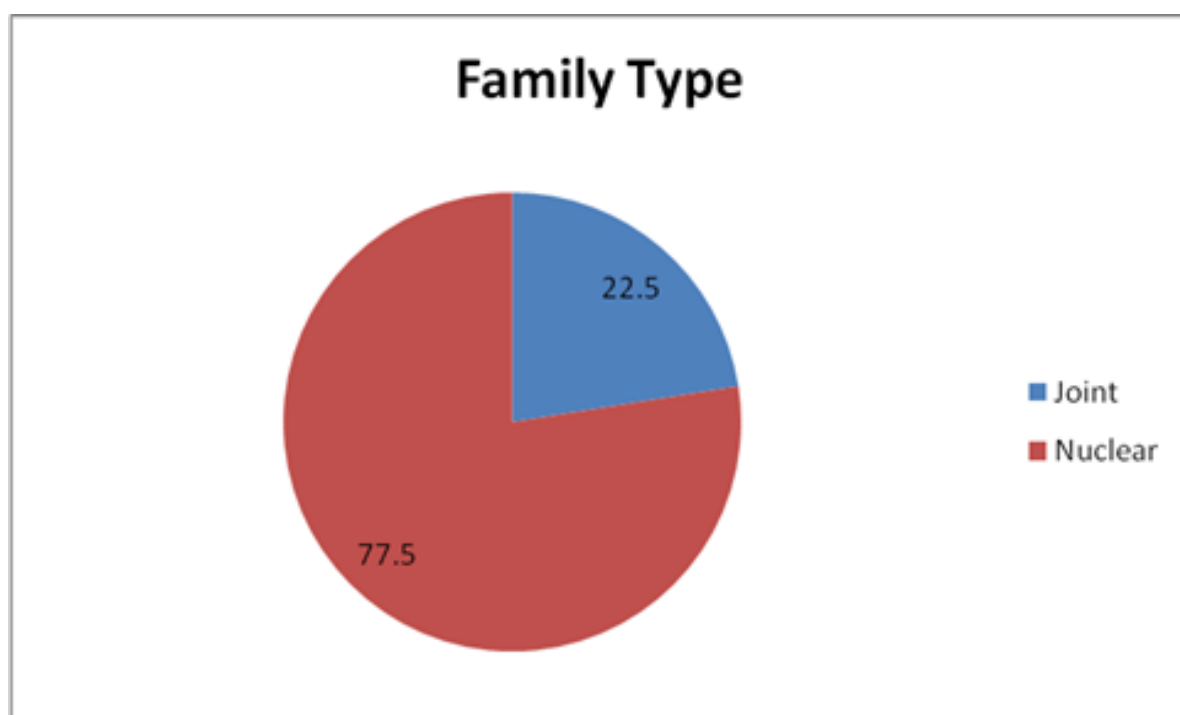
## **FAMILY TYPE:**

When the family type is analysed, among the students participated in this study, 22.5% belong to joint family and 77.5% belong to nuclear family.

**TABLE 5.1. Family Type**

<b>Particulars</b>	<b>Frequency (n=391)</b>	<b>Percentage (100%)</b>
Joint	88	22.50
Nuclear	303	77.50

**FIGURE 5.**



**TABLE 5.2. Anxiety and type of family**

Family type	Anxiety						Statistical inference
	No		Yes		Total		
	(n=274)	(100%)	(n=117)	(100%)	(n=391)	(100%)	
Joint	59	21.5%	29	24.8%	88	22.5%	X <sup>2</sup> =.498 Df=1
Nuclear	215	78.5%	88	75.2%	303	77.5%	.481>0.05 Not Significant

When the type of family to which the participant belongs to is analysed 22.5% belong to nuclear family and 77.50% belong to joint family.

The finding indicates that majority belong to nuclear family. As far as the prevalence of anxiety is concerned, there is no statistically significant difference among nuclear and joint families ( $p=0.481>0.05$  -not significant.)

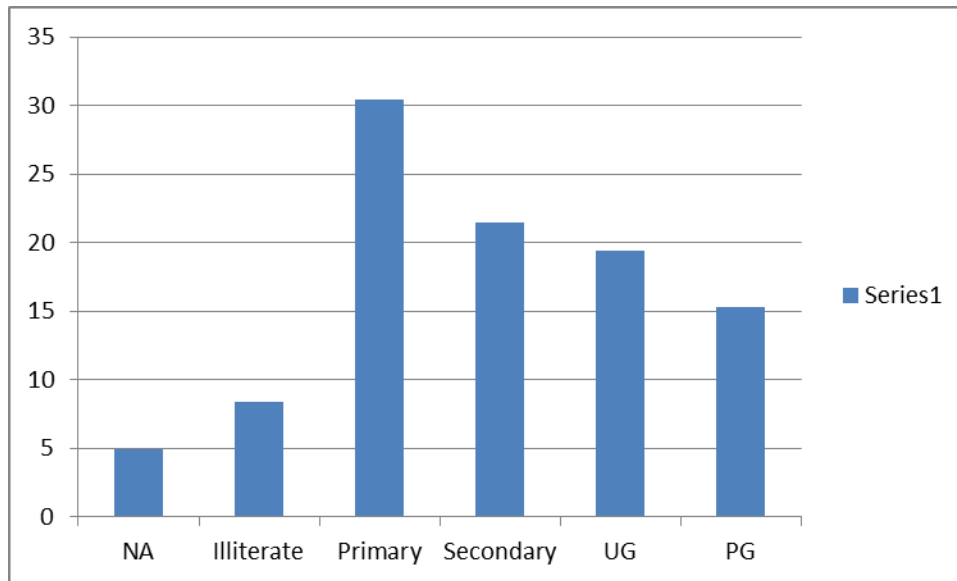
## **PARENTAL PROFILE-FATHER'S EDUCATION:**

In the sample studied, among the fathers of the participants, Illiterates were 8.4%,studied up to primary level( 5<sup>th</sup> standard) were 30.4%, studied up to secondary level(twelfth standard) were 21.5% ,graduates were 19.4% and post graduates were 15.3%. Maximum numbers of fathers were educated up to the primary level and there were least illiterates.4.9% of the students reported that their fathers are not alive or left the column empty which denote Not Applicable in the below mentioned table.

**TABLE 6.1. Parental profile (Father's Education)**

<b>Particulars</b>	<b>Frequency (n=391)</b>	<b>Percentage (100%)</b>
Not Applicable	19	4.90
Illiterate	33	8.40
Primary	119	30.40
Secondary	84	21.50
Under Graduate	76	19.40
Post Graduate	60	15.30

**FIGURE 6. Parental profile (Father's Education)**



**TABLE 6.2.**

	Anxiety and Father’s educational status						Statistical inference
Parental profile(fathredu)	No		Yes		Total		
	(n=274)	(100%)	(n=117)	(100%)	(n=391)	(100%)	
NA	12	4.4%	7	6.0%	19	4.9%	X <sup>2</sup> =11.325 Df=5 .045<0.05 Significant
No	23	8.4%	10	8.5%	33	8.4%	
Primary	74	27.0%	45	38.5%	119	30.4%	
Secondary	58	21.2%	26	22.2%	84	21.5%	
UG	64	23.4%	12	10.3%	76	19.4%	
PG	43	15.7%	17	14.5%	60	15.3%	

On comparing the anxiety level between the educational status of participant's fathers, the prevalence is 38.5% in children of fathers educated up to primary level, followed by 22% in children of fathers educated up to secondary level, then 14.5% in children of fathers who are post graduates, next 10.3% in children of fathers who are graduates and finally 8.4% in children of fathers who are illiterates. The difference observed is statistically significant ( $p$  value=0.45<0.05 ).This finding is in conflict with the study (Lozaratouetal Psychiatriki 2013) which states that children of fathers with higher educational qualification had lower levels of anxiety than children of fathers with low levels of education. Further research is needed in this area to confirm this finding.

#### **Parental profile (Father Work Nature):**

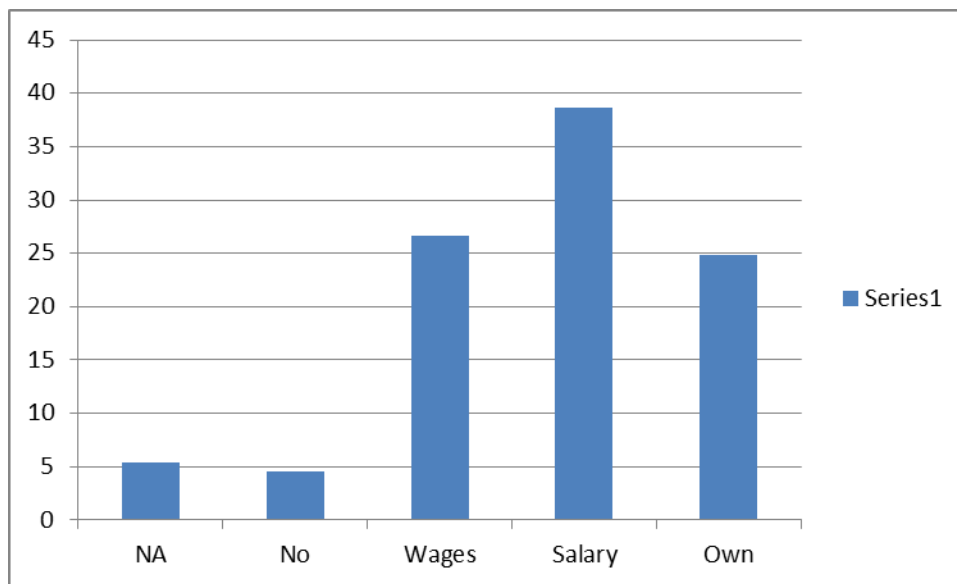
The fathers of the participants fall under the following work types. 4.6% were unemployed, 26.6% were going for daily wages, 38.6% were working for monthly salary, and 24.8% were doing own business.

**TABLE 7.1.Father work nature**

<b>Particulars</b>	<b>Frequency (n=391)</b>	<b>Percentage (100%)</b>
Not applicable	21	5.40
Un employed	18	4.60
daily Wages	104	26.60
Monthly Salary	151	38.60
Self employed	97	24.80



**FIGURE 7. Father work nature**



**TABLE 7.2.**

	Anxiety and father’s work nature						Statistical inference
Father work type	No		Yes		Total		
	(n=274)	(100%)	(n=117)	(100%)	(n=391)	(100%)	
NA	13	4.7%	8	6.8%	21	5.4%	X <sup>2</sup> =1.425 Df=4 .840>0.05  Not Significant
Unemployed	12	4.4%	6	5.1%	18	4.6%	
Wages	71	25.9%	33	28.2%	104	26.6%	
Salary	107	39.1%	44	37.6%	151	38.6%	
Self employed	71	25.9%	26	22.2%	97	24.8%	

On comparing father's work type and prevalence of anxiety, no statistically significant difference was noted.( p value=0.840>0.05 not significant).

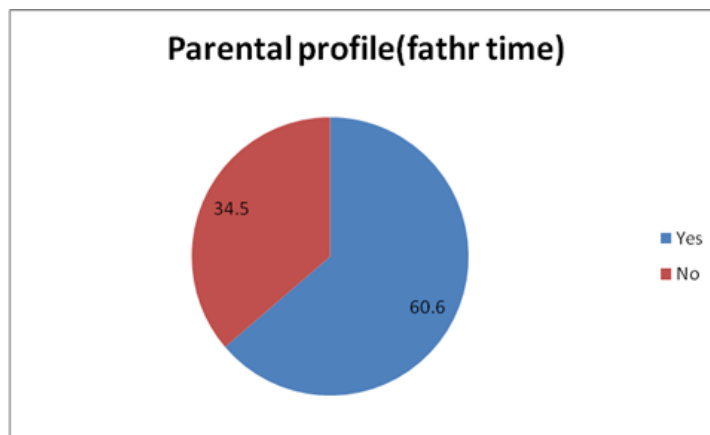
**Parental profile (Father spending quality time):**

**Quality time:** In this study quality time means, the time spent with parent, perceived by the participant as useful and happy to him or her in addition to their mere physical presence.

On analysing the time spent with father, 60.6% felt as quality time and 34.5% felt not as quality time. This finding is comparable with another study (Deb et al 2010) in which the percentage of quality time spent with father is 63.7%.

**TABLE 8.1. Father spending quality time**

<b>Particulars</b>	<b>Frequency (n=391)</b>	<b>Percentage (100%)</b>
Not applicable	19	4.90
Yes	237	60.60
No	135	34.50

**FIGURE 8.****TABLE 8.2.**

	Father spending quality time and anxiety						Statistical inference
Parental profile(father time)	No		Yes		Total		
	(n=274)	(100%)	(n=117)	(100%)	(n=391)	(100%)	
NA	12	4.4%	7	6.0%	19	4.9%	X <sup>2</sup> =1.379 Df=2 .502>0.05
Yes	171	62.4%	66	56.4%	237	60.6%	
No	91	33.2%	44	37.6%	135	34.5%	Not Significant

On comparing quality time spent and not spent with father and anxiety ,there is no statistically significant difference observed ( p value= 0.502>0.05 – not significant).

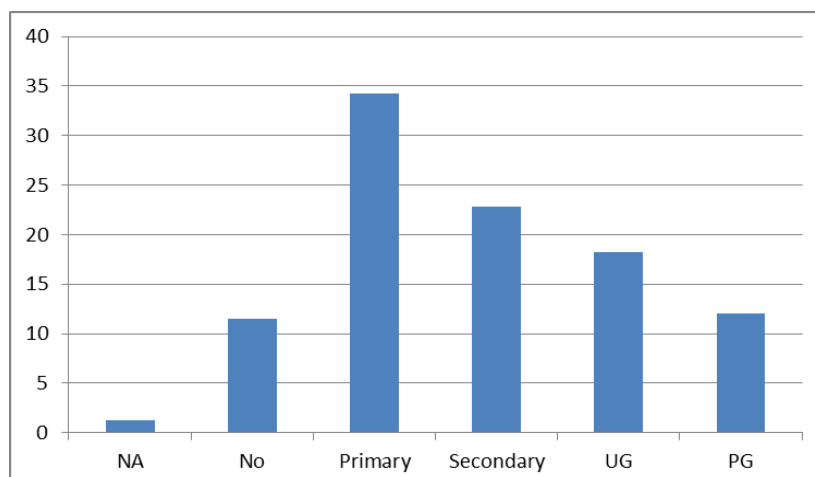
### Parental profile (Mother Education):

Regarding the mothers of participants, 11.5% were illiterates, 34.30% were studied up to primary level(fifth standard), 22.80% were studied up to secondary level(twelfth standard), 18.20% were graduates, and 12% were post graduates.

**TABLE 9.1. Parental profile (Mother's Education)**

Particulars	Frequency (n=391)	Percentage (100%)
Not Applicable	5	1.30
Illiterate	45	11.50
Primary	134	34.30
Secondary	89	22.80
Under Graduate	71	18.20
Post Graduate	47	12.00

**FIGURE 9. Parental profile (Mother's Education)**



**TABLE 9.2.**

	Anxiety and Mother's Education						Statistical inference
Parental profile(mother education)	No		Yes		Total		
	(n=274)	(100%)	(n=117)	(100%)	(n=391)	(100%)	
Not Applicable	4	1.5%	1	.9%	5	1.3%	X <sup>2</sup> =16.638 Df=5 .005<0.05 Significant
Illiterate	22	8.0%	23	19.7%	45	11.5%	
Primary	90	32.8%	44	37.6%	134	34.3%	
Secondary	65	23.7%	24	20.5%	89	22.8%	
Under Graduate	59	21.5%	12	10.3%	71	18.2%	
Post Graduate	34	12.4%	13	11.1%	47	12.0%	

On comparing the anxiety level between the educational statuses of participant's mothers, the prevalence is 37.6% in children of mothers educated up to primary level, followed by 20.5% in children of mothers educated up to secondary level, then 19.7% in children of mothers who are illiterates, next 11.7% in children of mothers who are post graduates and finally 10.3% in children of mothers who are graduates. The difference observed is statistically significant (p value=0.005<0.05 ).This finding is in conflict with the study( Lozaratouetal Psychiatriki 2013) which states that children from families with low

level of parental education are especially prone to high anxiety. Further research is needed in this area to confirm this finding.

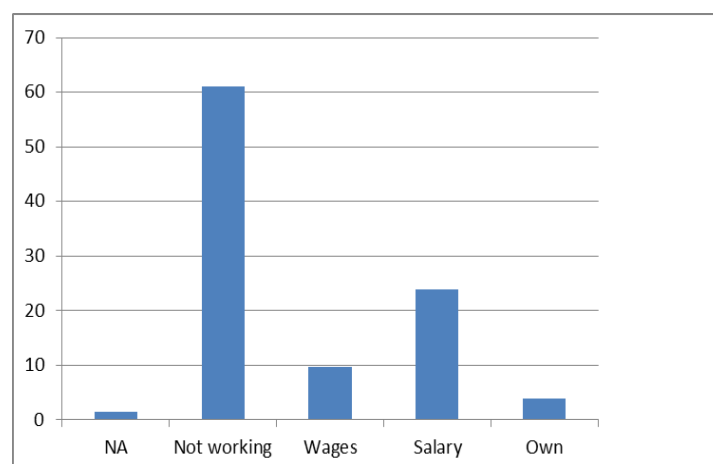
### **Parental profile (Mother Work Nature):**

Regarding the mothers of participants, majority were not working-61%, 9.7% were going for daily wages, 23.8% were working for monthly salary, and 3.8% were doing own business.

**TABLE 10.1. Parental profile (Mother Work Nature)**

<b>Particulars</b>	<b>Frequency (n=391)</b>	<b>Percentage (100%)</b>
Not applicable	6	1.50
Not Working	239	61.10
daily Wages	38	9.70
Monthly Salary	93	23.80
Self employed	15	3.80

**FIGURE 10. Parental profile (Mother Work Nature)**



**TABLE 10.2.**

	Anxiety and mother’s work nature						Statistical inference
Parental profile(mother work)	No		Yes		Total		
	(n=274)	(100%)	(n=117)	(100%)	(n=391)	(100%)	
NA	5	1.8%	1	.9%	6	1.5%	X <sup>2</sup> =2.487 Df=4 .647>0.05
No	171	62.4%	68	58.1%	239	61.1%	
Wages	23	8.4%	15	12.8%	38	9.7%	
Salary	65	23.7%	28	23.9%	93	23.8%	Not Significant
Own	10	3.6%	5	4.3%	15	3.8%	

On comparing prevalence of anxiety in children between working and non-working mothers, no statistically significant difference was noted. This finding is comparable with another study Gottfried and Gottfried et al 2006 which states child's social and emotional development is unlikely to be affected by maternal employment.

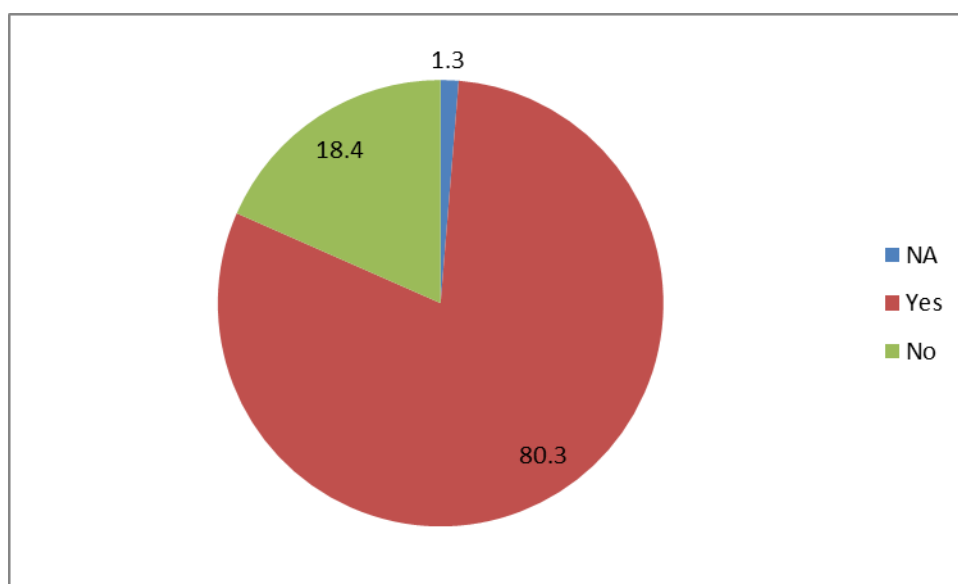
### Parental profile (Mother spending quality time):

On analysing the time spent with mother by the participant, 80.3%, felt as quality time and 18.4% felt not as quality time. This finding is comparable with another study (Deb et al 2010) in which the percentage of quality time spent with mother is 78.7%.

**TABLE 11.1. Parental profile (Mother spending quality time )**

Particulars	Frequency (n=391)	Percentage (100%)
Not applicable	5	1.30
Yes	314	80.30
No	72	18.40

**FIGURE 11. Parental profile (Mother spending quality time )**





**TABLE 11.2.**

	Anxiety and mother spending quality time						Statistical inference
Parental profile(mother time)	No		Yes		Total		
	(n=274)	(100%)	(n=117)	(100%)	(n=391)	(100%)	
Not Applicable	4	1.5%	1	.9%	5	1.3%	X <sup>2</sup> =.271 Df=2 .873>0.05
Yes	219	79.9%	95	81.2%	314	80.3%	
No	51	18.6%	21	17.9%	72	18.4%	Not Significant

On comparing quality time spent and not spent with mother and anxiety , there is no statistically significant difference observed. This finding is comparable with another study Moore and Hofferth et al 1979 which states that working mother though spend half the time when compared with non -working mothers, their children develop equal attachment with them as their counter parts.

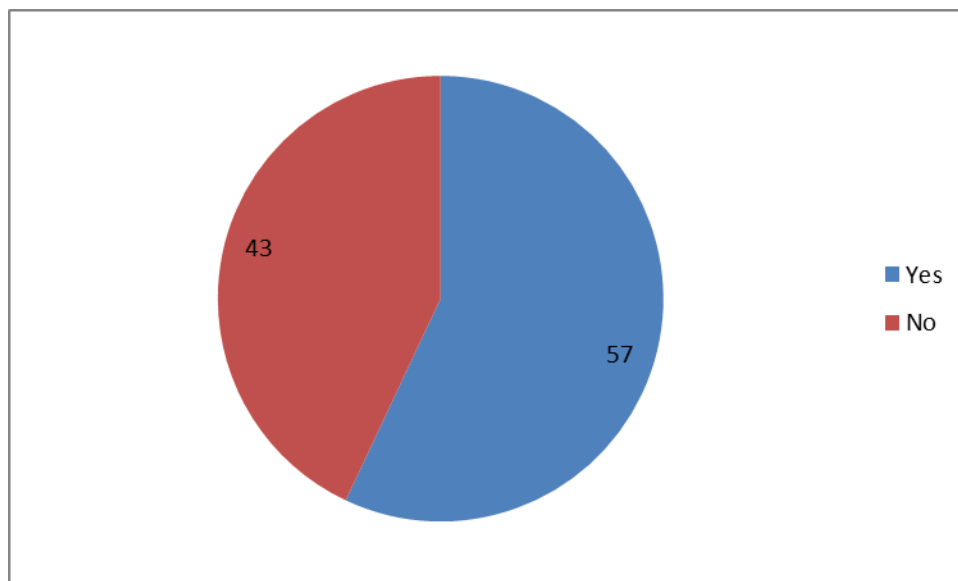
#### **Parental profile (Both spending quality time):**

On analysing the time spent by the participant with both parents, 57%, perceived as quality time and 43% perceived not as quality time.

**TABLE 12.1. Parental profile (Both spending quality time )**

<b>Particulars</b>	<b>Frequency (n=391)</b>	<b>Percentage (100%)</b>
Yes	223	57.00
No	168	43.00

**FIGURE 12. Parental profile (Both spending quality time )**



**TABLE 12.2.**

	Anxiety and both parents spending quality time						Statistical inference
Parental profile(both time)	No		Yes		Total		
	(n=274)	(100%)	(n=117)	(100%)	(n=391)	(100%)	
Yes	160	58.4%	63	53.8%	223	57.0%	X <sup>2</sup> =.692 Df=1
No	114	41.6%	54	46.2%	168	43.0%	.405>0.05 Not Significant

On comparing quality time spent and not spent with both parents and anxiety, there is no statistically significant difference observed. This finding is conflict with another study Chatterjee et al 2006 which states that children of parents who spend less time with them become anxious, feel lonely and neglected.

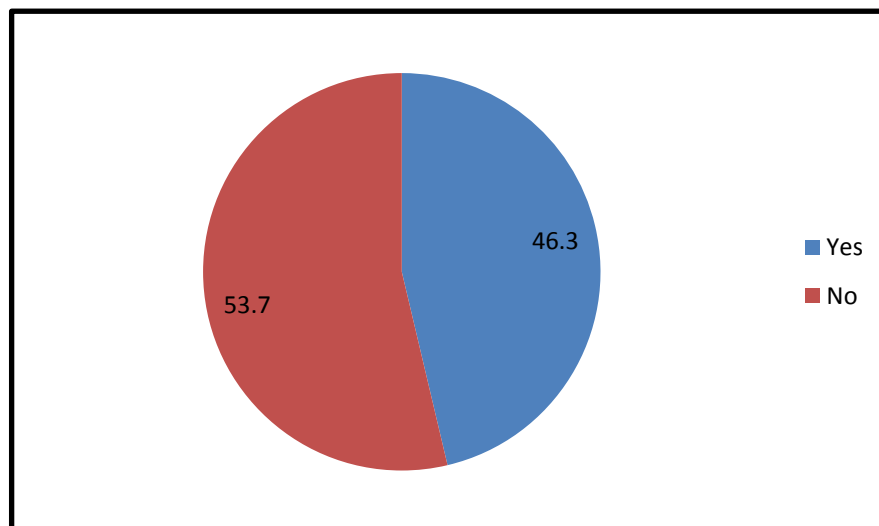
### Parental profile (Comfortable to share personal issues):

On analysing the comfort ability by the participant to share his or her personal issues with both parents, 46.30%, perceived as comfortable and 53.70% perceived not comfortable.

**TABLE 13. Parental profile (Sharing )**

Particulars	Frequency (n=391)	Percentage (100%)
Yes	181	46.30
No	210	53.70

**FIGURE 13. Parental profile (Sharing)**



On comparing the comfort and not comfort to share their personal issues with parents and anxiety , there is no statistically significant difference observed .

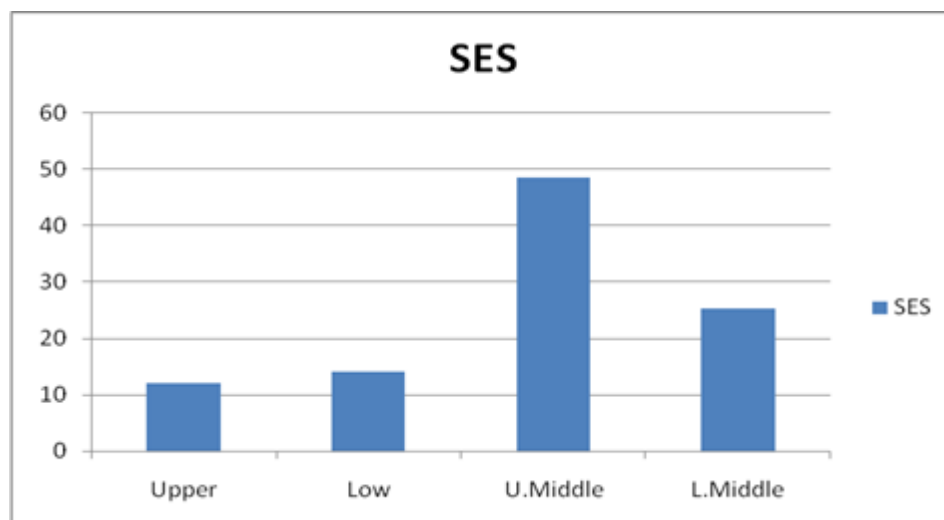
### **Socio Economic status:**

On analysing theSocial Economic status of the participants, majority, 49.6 % belong to Upper middle class, 25.3% belong to Lower middle class, 14% belong to Lower class and 12% belong to Upper class.

**TABLE 14.1. Social Economic status**

<b>Particulars</b>	<b>Frequency (n=391)</b>	<b>Percentage (100%)</b>
Upper	47	12.00
Low	55	14.10
Upper Middle	190	49.60
Lower Middle	99	25.30

**FIGURE 14. Social Economic status**



**TABLE 14.2.**

	Anxiety and Socio economic status						Statistical inference
Socio economic status	No		Yes		Total		
	(n=274)	(100%)	(n=117)	(100%)	(n=391)	(100%)	
Upper	32	11.7%	15	12.8%	47	12.0%	X <sup>2</sup> =9.284 Df=3 .026<0.05 Not Significant
Low	41	15.0%	14	12.0%	55	14.1%	
U.Middle	143	52.2%	47	40.2%	190	48.6%	
L.Middle	58	21.2%	41	35.0%	99	25.3%	

On comparing the Social Economic status of the participants and prevalence of anxiety, anxiety is observed to be more among upper middle class 40.2 %, followed by Lower middle class 35%, then upper class 12.8 %, finally Lower class 12 %. This finding is not found to be statistically significant. But this is comparable with another study (Deb et al 2010) in which the mean anxiety score was high in the middle class when compared to other socio economic classes.

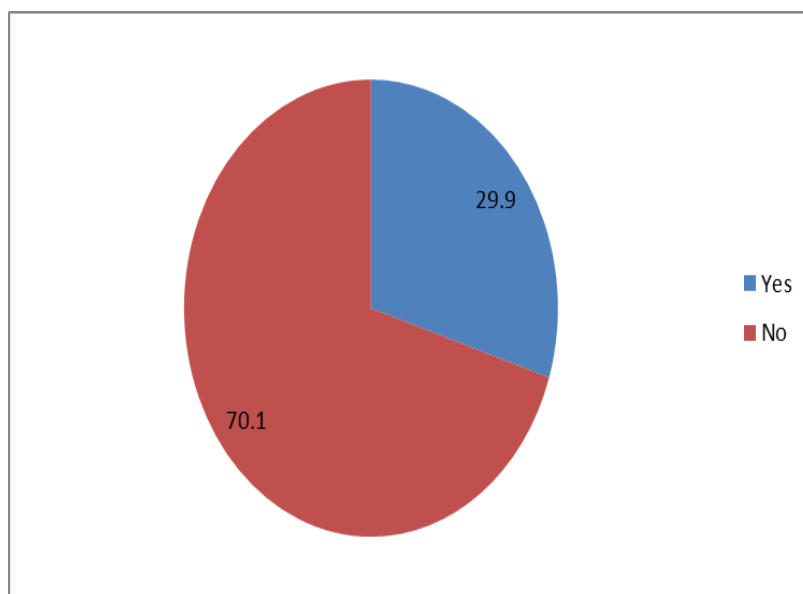
## PREVALENCE OF ANXIETY:

To analyse the anxiety faced by adolescents, the SCARED scale was used. The mean anxiety score was 23.58. Further analysis of the data revealed the prevalence of anxiety among the observed adolescents to be 29.9% .

**TABLE 15. Anxiety Prevalence**

Particulars	Frequency (n=391)	Percentage (100%)
No	274	70.1
Yes	117	29.9

**FIGURE 15. Anxiety Prevalence**



This finding is comparable with the well-known meta-analysis (Chandrasekhara and Reddy et al 1998<sup>(1)</sup>) which showed prevalence of neurotic disorders to range from 18.7 to 22.7%. Another study (Deb and Chatterjee et al) also showed the prevalence of anxiety among adolescent boys to be around 21%. Another study (NervMent Dis 2010 et al) showed the prevalence of anxiety to be around 24.4% in students with mean age of 19 years.

### **PREVALENCE OF DEPRESSION:**

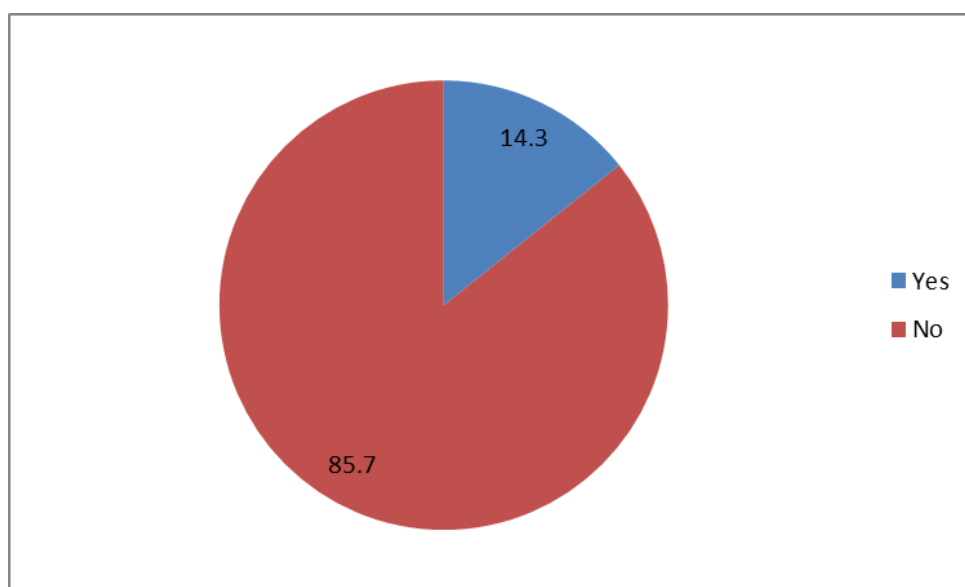
To analyse the depressive symptoms faced by adolescents, the Becks Depression Inventory scale was used. The mean depression score was 13.71. Further analysis of the data revealed the prevalence of depression among the adolescents observed to be 14.3 %. This finding is comparable with Malhotra et al 2007 which showed the prevalence of affective disorders to be up to 13.49% (0 to 14 years). Another study, Bansal et al 2009 showed the prevalence rate of depression to be around 18.9%. Another study (NervMent Dis 2010 et al) showed the prevalence of Depression to be around 18.5% in students with mean age of 19 years.



**TABLE 16. Depression Prevalence**

Particulars	Frequency (n=391)	Percentage (100%)
No	335	85.7
Yes	56	14.3

**FIGURE 16. Depression Prevalence**



## 7. DISCUSSION

This study measured the anxiety and depression among adolescents and compared anxiety across various dimensions.

Total number of participants is 391. Gender distribution is 204 girls and 187 boys. The participants belong to 9<sup>th</sup> and 11<sup>th</sup> standard at school. Mean age of the participant is 14.74 years. Mean SCARED score is 23.58 and mean Beck score is 13.71.

### **Prevalence of Anxiety:**

Analysis of the data revealed the prevalence of anxiety among the observed adolescents to be 29.9%. This finding is comparable with the well-known meta-analysis ( Chandrasekhara and Reddy et al 1998<sup>(1)</sup> ) which showed prevalence of neurotic disorders to range from 18.7 to 22.7%. Another study (Deb and Chatterjee et al ) also showed the prevalence of anxiety among adolescent boys to be around 21%. Another study ( NervMent Dis 2010 et al ) showed the prevalence of anxiety to be around 24.4% in students with mean age of 19 years.

The prevalence observed in this study is slightly higher than the previous studies. The meta-analysis by Chandrasekhara and Reddy et al 1998. Another latest study Deb and chatterjee et al was done in the year 2010. This study is done five years after the latest study compared. The participants here ninth

standard students and eleventh standard students are both in the nearing year of Board exams, Tenth standard Public Exam and Twelfth standard school final exams respectively. In our Indian, particularly Tamilnadu educational system getting marks in tenth exam will fetch them seat in good higher secondary schools and getting good marks in the twelfth exam will fetch them seat in good colleges. As far as education is concerned, these two marks determine their future which might be the reason for increasing trend of anxiety prevalence among school going adolescents. According to a report published in Indian Journal of Pediatrics November 2007, pressure from school and parents, lengthy format of Indian state government Board exams, and heavy subject contents are some of the important contributing factors for increased anxiety among school students.

### **Prevalence of Depression:**

The mean depression score was 13.71. by using Beck Depression Inventory-Adolescent version. Further analysis of the data revealed the prevalence of depression among the adolescents observed to be 14.3 %. This finding is comparable with Malhotra et al 2007 which showed the prevalence of affective disorders to be up to 13.49% (0 to 14 years). Another study, Bansal et al 2009 showed the prevalence rate of depression to be around 18.9%. Another study(NervMent Dis 2010 et al) showed the prevalence of Depression to be around 18.5% in students with mean age of 19 years.

Adolescents face health challenges like pediatric population but are often taken care of by general adult physicians. The unique nature of adolescent's health problems can be attributed to rapid physical and emotional growth, and conflicting ideas from the external world. If proper support and training is not given, adolescents will not have adequate knowledge and would be less confident to make decisions (Mates D, Allison et al 1992).

Adolescents are generally considered as a healthy age group. In any observed period, 20% of them experience a mental health issue, depression and anxiety being more common. Suicide is one among the leading causes of death in young people (WHO) (Geneva 2003).

Mental health is the basic for good quality of life. Joy full and confident adolescents are likely to become confident and happy adults. They in turn provide contributions to the health and well-being of nations (Rao M et al 2010)

Researchers in Korea and Japan (Lee M et al 2000) have identified the experience of distress and other stress factors in adolescents. In the year 2011, it was found that failure in examinations as the main reason for suicide. The number estimated was around 2381 children, or more than six children in a day.

Youth suicide regarded as the tip of iceberg, masks anxiety and depression experienced by many students. (National Crime Records Bureau

(NCRB): Government of India). All these evidences indicate the increasing trend of depressive symptoms which is the inference in our study also.

### **Prevalence of Anxiety between Genders:**

The prevalence of anxiety among girls is 74.4% and boys is 25.6%. When anxiety is compared across gender, girls have more anxiety than boys. This finding is similar to other studies like Campbell and Ropa et al 1994 and Costello Egger and Angold et al 2003 which also showed that anxiety is more prevalent among girls than boys.

In the growing competitive education market place (Donner et al 2006), families have different kinds of expectations regarding the educational outcomes for boys and girls. Recent trend is sending a daughter to school is not only for good marriage proposals as thought previously. Parent's expectation of future employment to improve their financial status and independence might impose compulsion to study. Heavy competition among girls and peer pressure to excel in exams may also contribute to the increased prevalence of anxiety among girls. Further research is needed in future in this regard.

### **Comparison of Anxiety between Medium of Instruction:**

As far as the medium of instruction is concerned, Tamil medium students constituted 49.9% and English medium students constituted 50.1% in this sample. When compared among medium of instruction, Anxiety in Tamil

medium students is 63.2% and English medium students is 36.8%. Anxiety among Tamil ( i.e. the regional language in this area) medium students is found to be more than the English medium students. The p value observed is  $0.001 < 0.05$ , which is statistically significant. This finding is in consistent with another study ( Deb and Chatterjee et al 2010) which compared Bengali medium students with English medium students and showed that children learning through Bengali(regional language) medium school were more anxious than English medium students. This is explained by the recent trend to view schools with Tamil as medium of study as inferior compared to English medium schools. According to Annamalai et al 2004,the fact that Universities retaining English as medium of instruction and also the view that it's use is rising in the sphere of International business and the present situation that,more available job opportunities when English is known, are some of the reasons for English instruction in Indian schools. In India English medium schools have boomed in the past two decades (Donner et al 2006).All these factors may contribute to the high prevalence of anxiety among Tamil medium students than their English medium counterparts. Further research is needed in this area to confirm the finding observed in this study.

### **Anxiety between children of working and non-working mothers:**

On comparing prevalence of anxiety in children between working and non-working mothers, no statistically significant difference was noted. This finding is comparable with another study Gottfried and Gottfried et al 2006 which states that child's social and emotional development is unlikely to be affected by mother's employment status.

The finding observed in this study is in conflict with another study. Deb & Chatterjee et al 2010, which showed the mean anxiety scores to be higher for children of working mothers than non-working mothers.

Another study states that, mothers having good job, good support from family and support will be more committed and have good impressions of their children. The authoritative parenting style is the one associated with favourable outcomes in cognitive domains.. (Crockenberg and Litman, 1991). So working status of mother did not affect the prevalence of anxiety as per the findings of this study. More research is needed in this aspect as the number of working mothers is markedly increasing in the current trend.

### **Prevalence of Anxiety and Socio economic status:**

Socio economic status of the participants in this study is assessed by using Wealth Index Scale which measures the ownership of certain specific items. On comparing the Social Economic status of the participants and

prevalence of anxiety, anxiety is observed to be more among upper middle class 40.2%, followed by Lower middle class 35%, then upper class 12.8 %, finally Lower class 12 %. This finding is not found to be statistically significant. But this is comparable with another study (Deb et al 2010) in which the mean anxiety score where high in the middle class when compared to other socio economic classes.

The finding that anxiety is more prevalent among the middle socio economic class than other classes is similar to the previous studies. The explanation might be increasing middle class population, compulsion for educational achievement in them, and necessity for occupation in this class of people. The social development in India is under great pressure and this is especially felt by the middle class who are at stress, to protect their social position, and to go further.(Ganguly and Strauss et al 2009)

Lesser prevalence of anxiety among adolescents of high socio economic class may be partly attributed to their secured future at least in terms of material and financial aspects (Kaplan & Sadock's 2000).



**Anxiety when compared across quality time spent and comfort ability of sharing personal issues with parents:**

On comparing quality time spent and not spent with both parents and anxiety, there is no statistically significant difference observed. This finding is conflict with another study Chatterjee et al 2006 which states that children of parents who spend less time with them become anxious, feel lonely and neglected. On comparing the comfort and not comfort to share their personal issues with parents and anxiety, no statistically significant difference was observed.

## **8.CONCLUSION**

1. The Prevalence of anxiety in the school going adolescents observed in this study is 29.9 %.
2. The anxiety observed is more among girls than boys .
3. The anxiety observed is more among the middle socio economic class than lower and upper class.
4. The prevalence of anxiety did not show any statistically significant difference when compared between working and non-working mothers.
5. The prevalence of anxiety among adolescents observed, did not show any statistically significant difference when compared between quality time spent with parents, father's working status and feel of comfort to share personal issues with parents.
6. The prevalence of depression among the school going adolescents recruited in this study is found to be 14.3 %.

### **Recommendations:**

In the current situation already state governments in India are taking many steps to improve adolescent's health. As the prevalence of depression and anxiety are clearly in the increasing trend adolescent's mental well-being can be given special concern. Like other screening programmes in Schools, screening for impairment in mental health can

also be carried out on a regular basis. Parents and teachers can also be counselled regarding the vulnerability of adolescent age group to experience mental illness. The teachers and willing parents can be trained by health personnel how to deal with mental health issues in adolescent age group. Further research is needed in this area as children and adolescents are the building blocks of the whole nation and improvement in their health in turn improve the prosperity of the nation.

## **9.LIMITATIONS**

1. The study was conducted among limited number of adolescents (sample size=400). So the findings cannot be generalised.
2. The schools chosen are from the place in urban set up and did not represent all kinds of school types available in the current scenario
3. This is a cross sectional study where interview took place only once. Longitudinal studies might yield better reliable results.

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# *ANNEXURES*

## Appendix-1

### Socio Demographic data sheet

**Number:**          **Age:**    **M/F:**          **Standard:**          **Medium:** Tamil/English

**Family type:** nuclear/joint          **Mother:** working/not working

**Parental profile:**

	Age	Education(up to 5 <sup>th</sup> /up to 12 <sup>th</sup> /graduate/post graduate)	Occupation(daily wages/ Monthly salary/own business/giving job to others)
Father			
Mother			

### Socio economic status: wealth index scale

Item	Essential	Useful					Nonessential		Total score
Present: mark 1	Electricity	Radio	Scooter	Bicycle	Television	Land	Car	Fridge	
Absent: mark 0									

**Note:** circle according to the score

**Low:** 0 to 2

**Middle:** 3 to 7

**Upper:** 8

**Quality time spent with parents: circle yes or no, then specify.**

	Parameters	Yes			No
		Father	Mother	Both	
1	Do your Parents find time to speak to you during week days?				
2	During holidays do your parents take you out?				
3	Do you think that you get quality time from your parents?				
4	Do you comfortable to share your personal problem?				

## Appendix-2

### o//Screen for Child Anxiety Related Disorders (SCARED) Youth Version

<p><i>Directions: Below is a list of sentences that describe how people feel. Read each phrase and decide if it is "Not True or Hardly Ever True", or "Somewhat True or Sometimes True", or "Very True or Very Often True" for you. Then, for each sentence, write the number that corresponds to the response that seems to describe you <u>for the last 3 months</u>.</i></p>	<p><b>0 = Not True or Hardly Ever True</b>  <b>1= Somewhat True or Sometimes True</b>  <b>2= Very True or Often True</b></p>
1. When I feel frightened, it is hard to breathe	
2. I get headaches when I am at school.	
3. I don't like to be with people I don't know well.	
4. I get scared if I sleep away from home.	
5. I worry about other people liking me.	
6. When I get frightened, I feel like passing out.	
7. I am nervous.	
8. I follow my mother or father wherever they go.	
9. People tell me that I look nervous.	
10. I feel nervous with people I don't know well.	
11. I get stomachaches at school.	
12. When I get frightened, I feel like I am going crazy.	
13. I worry about sleeping alone.	
14. I worry about being as good as other kids.	
15. When I get frightened, I feel like things are not real.	
16. I have nightmares about something bad happening to my parents.	
17. I worry about going to school.	
18. When I get frightened, my heart beats fast.	
19. I get shaky.	
20. I have nightmares about something bad happening to me.	
21. I worry about things working out for me.	
22. When I get frightened, I sweat a lot.	
23. I am a worrier.	
24. I get really frightened for no reason at all.	
25. I am afraid to be alone in the house.	
26. It is hard for me to talk with people I don't know well.	
27. When I get frightened, I feel like I am choking.	
28. People tell me that I worry too much.	
29. I don't like to be away from my family.	
30. I am afraid of having anxiety (or panic) attacks.	
31. I worry that something bad might happen to my parents.	
32. I feel shy with people I don't know well.	
33. I worry about what is going to happen in the future.	
34. When I get frightened, I feel like throwing up.	
35. I worry about how well I do things.	
36. I am scared to go to school.	



<b>37.</b> I worry about things that have already happened.	
<b>38.</b> When I get frightened, I feel dizzy.	
<b>39.</b> I feel nervous when I am with other children or adults and I have to do something while they watch me (for example: read aloud, speak, play a game, play a sport).	
<b>40.</b> I feel nervous when I am going to parties, dances, or any place where there will be people that I don't know well.	
<b>41.</b> I am shy.	
<b>TOTAL</b> <b>SCORE:</b> A total score of $\geq 25$ may indicate the presence of an Anxiety Disorder. Scores higher than 30 are more specific.	0
<b>Panic Disorder or significant somatic symptoms.</b> A score of 7 for items 1, 6, 9, 12, 15, 18, 19, 22, 24, 27, 30, 34, 38 may indicate Panic Disorder or significant somatic symptoms.	0
<b>Generalized Anxiety Disorder.</b> A score of 9 for items 5, 7, 14, 21, 23, 28, 33, 35, 37 may indicate Generalized Anxiety Disorder.	0
<b>Separation Anxiety Disorder.</b> A score of 5 for items 4, 8, 13, 16, 20, 25, 29, 31 may indicate Separation Anxiety.	0
<b>Social Anxiety Disorder.</b> A score of 8 for items 3, 10, 26, 32, 39, 40, 41 may indicate Social Anxiety Disorder.	0
<b>Significant school avoidance.</b> A score of 3 for items 2, 11, 17, 36 may indicate significant school avoidance.	0
<i>For children ages 8 to 11, it is recommended that the clinician explain all questions, or have the child answer the questionnaire sitting with an adult in case they have any questions.</i>	
Developed by Boris Birmaher, MD, Sunneet Khetarpal, MD, Marlane Cully, MEd, David Brent, MD, and Sandra McKenzie, PhD, Western Psychiatric Institute and Clinic, University of Pittsburgh (October, 1995). Email: birmaherb@upmc.edu.	
See Birmaher, B., Brent, D.A., Chiappetta, L., Bridge, J., Monga, S., & Baugher, M. (1999). Psychometric properties of the Screen for Child Anxiety Related Emotional Disorders (SCARED): A replication study. Journal of the American Academy of Child and Adolescent Psychiatry, 38 (10),1230-6.	

## Appendix-3

### Beck's Depression Inventory-2: Adolescent version

**Instructions:** This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, then pick out the **one statement** in each group that best describes the way you have been feeling during the **past two weeks, including today**. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

#### 1. Sadness

- 0 I do not feel sad.
- 1 I feel sad much of the time.
- 2 I am sad all the time.
- 3 I am so sad or unhappy that I can't stand it.

#### 2. Pessimism

- 0 I am not discouraged about my future.
- 1 I feel more discouraged about my future than I used to be.
- 2 I do not expect things to work out for me.
- 3 I feel my future is hopeless and will only get worse.

#### 3. Past Failure

- 0 I do not feel like a failure.
- 1 I have failed more than I should have.
- 2 As I look back, I see a lot of failures.
- 3 I feel I am a total failure as a person.

#### 4. Loss of Pleasure

- 0 I get as much pleasure as I ever did from the things I enjoy.
- 1 I don't enjoy things as much as I used to.
- 2 I get very little pleasure from the things I used to enjoy.
- 3 I can't get any pleasure from the things I used to enjoy.

#### 5. Guilty Feelings

- 0 I don't feel particularly guilty.
- 1 I feel guilty over many things I have done or should have done.
- 2 I feel quite guilty most of the time.
- 3 I feel guilty all of the time.

#### 6. Punishment Feelings

- 0 I don't feel I am being punished.
- 1 I feel I may be punished.
- 2 I expect to be punished.
- 3 I feel I am being punished.

#### 7. Self-Dislike

- 0 I feel the same about myself as ever.
- 1 I have lost confidence in myself.
- 2 I am disappointed in myself.
- 3 I dislike myself.

#### 8. Self-Criticalness

- 0 I don't criticize or blame myself more than usual.
- 1 I am more critical of myself than I used to be.
- 2 I criticize myself for all of my faults.
- 3 I blame myself for everything bad that happens.

#### 9. Suicidal Thoughts or Wishes

- 0 I don't have any thoughts of killing myself.
- 1 I have thoughts of killing myself, but I would not carry them out.
- 2 I would like to kill myself.
- 3 I would kill myself if I had the chance.

#### 10. Crying

- 0 I don't cry anymore than I used to.
- 1 I cry more than I used to.
- 2 I cry over every little thing.
- 3 I feel like crying, but I can't.

**11. Agitation**

- 0 I am no more restless or wound up than usual.
- 1 I feel more restless or wound up than usual.
- 2 I am so restless or agitated that it's hard to stay still.
- 3 I am so restless or agitated that I have to keep moving or doing something.

**12. Loss of Interest**

- 0 I have not lost interest in other people or activities.
- 1 I am less interested in other people or things than before.
- 2 I have lost most of my interest in other people or things.
- 3 It's hard to get interested in anything.

**13. Indecisiveness**

- 0 I make decisions about as well as ever.
- 1 I find it more difficult to make decisions than usual.
- 2 I have much greater difficulty in making decisions than I used to.
- 3 I have trouble making any decisions.

**14. Worthlessness**

- 0 I do not feel I am worthless.
- 1 I don't consider myself as worthwhile and useful as I used to.
- 2 I feel more worthless as compared to other people.
- 3 I feel utterly worthless.

**15. Loss of Energy**

- 0 I have as much energy as ever.
- 1 I have less energy than I used to have.
- 2 I don't have enough energy to do very much.
- 3 I don't have enough energy to do anything.

**16. Changes in Sleeping Pattern**

- 0 I have not experienced any change in my sleeping pattern.
- 1a I sleep somewhat more than usual.
- 1b I sleep somewhat less than usual.
- 2a I sleep a lot more than usual.
- 2b I sleep a lot less than usual.
- 3a I sleep most of the day.
- 3b I wake up 1-2 hours early and can't get back to sleep.

**17. Irritability**

- 0 I am no more irritable than usual.
- 1 I am more irritable than usual.
- 2 I am much more irritable than usual.
- 3 I am irritable all the time.

**18. Changes in Appetite**

- 0 I have not experienced any change in my appetite.
- 1a My appetite is somewhat less than usual.
- 1b My appetite is somewhat greater than usual.
- 2a My appetite is much less than before.
- 2b My appetite is much greater than usual.
- 3a I have no appetite at all.
- 3b I crave food all the time.

**19. Concentration Difficulty**

- 0 I can concentrate as well as ever.
- 1 I can't concentrate as well as usual.
- 2 It's hard to keep my mind on anything for very long.
- 3 I find I can't concentrate on anything.

**20. Tiredness or Fatigue**

- 0 I am no more tired or fatigued than usual.
- 1 I get more tired or fatigued more easily than usual.
- 2 I am too tired or fatigued to do a lot of the things I used to do.
- 3 I am too tired or fatigued to do most of the things I used to do.

**21. Loss of Interest in Sex**

- 0 I have not noticed any recent change in my interest in sex.
- 1 I am less interested in sex than I used to be.
- 2 I am much less interested in sex now.
- 3 I have lost interest in sex completely.

Subtotal Page 2

Subtotal Page 1

Total Score

NR156

## APPENDIX 4

### சமூகப் பொருளாதாரவிவரம்

எண் : வயது: ஆண்/பெண்: வகுப்பு : பயிற்றுமொழி: தமிழ் /ஆங்கிலம்

குடும்பஅமைப்பு : தனி / கூட்டுக் குடும்பம்தாய் வேலைக்குச்செல்பவரா?: ஆம் /இல்லை

	வயது	கல்வி - இல்லை/ 5ஆம் வகுப்பு வரை/ 12ஆம் வகுப்பு வரை/ பட்டப்படிப்பு / பட்டமேற்படிப்பு	வேலை (இல்லை/ தினக்கூலி/ மாதச்சம்பளம் / சுயதொழில் / மற்றவருக்குவேலைகொடுப்பவர்)
தந்தை			
தாய்			

சமூகப்பொருளாதாரநிலை(1 அல்லது 0 குறிக்கவும்)

பொருள் - இருக்கிறது (1), இல்லை (0)

அத்தியாவசியமானவை	உபயோகமானவை					ஆடம்பரமான பொருட்கள்		மொத்தம்
மின்சார இணைப்பு	வானொலி (ரேடியோ)	வண்டி (ஸ்கூட்டர்)	சைக்கிள்	டிவி	நிலம்	கார்	பிரிட்ஜ்	

கூட்டுஎண்ணிக்கைக்குஏற்றவாறுவட்டமிடவும்.

தாழ்மை - 0 முதல் 2

நடுத்தரம் - 3 முதல் 7

உயர்வு - 8

பெற்றோருடன் செலவிடும் நேரம் - ஆம் / இல்லைவட்டமிடவும்

பின்னர் அதனைவிளக்கமாகக் குறிக்கவும்.

	கேள்விகள்	ஆம்			இல்லை
		தாய்	தந்தை	இருவரும்	
1	உங்கள் பெற்றோர் வாரநாட்களில் உங்களுடன் பேசநேரம் ஒதுக்குகிறார்களா?				
2	விடுமுறைநாட்களில் உங்கள் பெற்றோர் உங்களைவெளியில் அழைத்துச் செல்வதுண்டா?				
3	உங்கள் பெற்றோர் உங்களுடன் தரமானநேரம் செலவிடுதாகநீங்கள் உணர்கிறீர்களா?				
4	உங்கள் அந்தரங்க விஜயங்களை உங்கள் பெற்றோருடன் பகிர்ந்துகொள்ளவிரும்புகிறீர்களா?				

## APPENDIX 5

சிறுவர் உளக் கவலை குறித்த உணர்ச்சிசார் பிறழ்வுநிலைகளுக்கான பரிசீலனை (SCARED)

சிறுவரின் கருத்து – பக்கம் 1 (பிள்ளை நிரப்பவேண்டியது)

அபிவிருத்திசெய்தோர் - Boris Birmaher,M.D., M Sueeta Khetarpal, M.D., Marlane Cully,M.Ed.,  
avidBrent,M.D., and Snadra MCKenzic, Ph.D., Western Psychiatric Institute and Clinic,  
University of Pittsburgh (October 1995). E-mail: birmaherb@upmc.edu

பார்க்கவும்: Birmaher, B., Brent.D.A., Chippetta.L., Bridge.J., Monga.S., & Baugher.M (1999).  
Psychometric properties of the Screen for Child Anxiety Related Emotional Disorders  
(SCARED): a replication study. Journal of the American Academy of Child and Adolescent  
Psychiatry. 38 (10)1230-6

வ.எண்-----

நாள்: -----

அறிவுறுத்தல்கள்:ஏ

ஆட்களின் உணர்வுகளை விபரிக்கும் சில வாக்கியங்களின் நிரலொன்று கீழே தரப்பட்டுள்ளது.  
ஒவ்வொரு சொற்றொடரையும் வாசித்து, அவை உங்களைப் பொருத்தவரையில் “உண்மையில்லை  
அல்லது ஒருபொழுதும் உண்மையில்லை” அல்லது “ஓரளவுக்கு உண்மை அல்லது சிலவேளைகளில்  
உண்மை” அல்லது “மிகவும் உண்மை அல்லது அனேக சந்தர்ப்பங்களில் உண்மை” என்பதை  
தீர்மானிக்கவும். பின்னர் ஒவ்வொரு வாக்கியம் சம்பந்தமாகவும் கடந்த மூன்று மாத காலப்பகுதியில்  
உங்கள் நிலைமையை விபரிக்கும் பதிலுடன் நேரொத்ததாக அமையும்வகையில் ஒரு வட்டத்தை  
நிரப்பவும்.

வ.எண்		0	1	2	
		உண்மையில்லை அல்லது ஒருபொழுதும் உண்மையில்லை	ஓரளவுக்கு உண்மை அல்லது சிலவேளைகளில் உண்மை	மிகவும் உண்மை அல்லது அனேக சந்தர்ப்பங்களில் உண்மை	
1.	நான் பயப்படும் பொழுது சுவாசிப்பது கஸ்டமாக இருக்கும்.				PN
2.	நான் பயப்படும் பொழுது உணர்விழப்பதுபோல் இருக்கின்றது.				PN
3.	நான் பதற்றப்படுவது போல் தோற்றமளிப்பதாக மற்றவர்கள் சொல்வார்கள்.				PN
4.	எனக்குப் பயம் ஏற்படும்போது பைத்தியம் பிடிப்பதுபோல் இருக்கின்றது.				PN
5.	நான் பயப்படும் பொழுது எதுவும் உண்மையில்லை என்ற உணர்வு ஏற்படுகின்றது.				PN
6.	நான் திடீரென பயப்பட்டால் என் இதயம் வேகமாக துடிக்கும்.				PN
7.	நான் நடுக்கமடைவது உண்டு.				PN
8.	நான் பயப்படும் பொழுது எனக்கு அதிகமாக வியர்க்கும்.				PN
9.	எக்காரணமும் இல்லாமல் நான் பயப்படுவேன்.				PN
10.	நான் திடீரென பயப்படும் போது				PN

	மூச்சுதிணுவுதுபோல் உணர்வேன்.				
11.	எனக்கு மனக்கவலை அல்லது பெரும் அச்சம் குறித்து பயம் உள்ளது.				PN
12.	நான் பயப்படும் பொழுது வாந்தி வருவது போல் உணர்வு ஏற்படுகிறது.				PN
13.	திடீரென பயந்தால் எனக்கு தலை சுற்றுவதுபோல் உணர்வேன்				PN
14.	என்னோடு மற்றவர்கள் விருப்பமாக இருப்பதைப்பற்றி நான் கவலைப்படுகிறேன்				GD
15.	நான் பதற்றப்படும் ஒருவர்.				GD
16.	மற்றச் சிறுவர்களைப்போல நன்றாக இருக்கவேண்டுமென்று நான் கவலைப்படுவேன்.				GD
17.	எனக்கு அனைத்தும் நன்றாக நடக்குமா என்பது குறித்து நான் கவலைப்படுவேன்.				GD
18.	நான் கவலைப்படும் ஒருவர்.				GD
19.	நான் அதிகம் கவலைப்படுவதாக மற்றவர்கள் என்னிடம் கூறுகிறார்கள்.				GD
20.	எதிர்காலத்தில் என்ன நடக்கப் போகிறது என்பது பற்றி கவலைப்படுகிறேன்.				GD
21.	எனது வேலைகளைச் சிறப்பாக செய்கிறேனா எனக் கவலைப்படுகிறேன்.				GD
22.	நான் நடந்து முடிந்த காரியங்களைப்பற்றி கவலைப்படுகிறேன்.				GD
23.	எனது வீட்டில் இல்லாமல் வேறு இடங்களில் தூங்கும் போது எனக்கு பயம்ற்படும்.				SP
24.	எனது தாய் அல்லது தந்தை எங்கு சென்றாலும் நான் அவர்களை தொடர்ந்து செல்வேன்.				SP
SP 25.	SP தனியாக நித்திரைசெய்ய நேர்ந்தால் எனக்கு கவலை ஏற்படும்.				SP
26.	நான் தூங்கும் பொழுது எனது பெற்றோர்களுக்கு ஏதாவது தீங்கு ஏற்படுவது போல் கனவு காண்பது உண்டு.				SP
27.	எனக்கு தீங்கு நடப்பது போல் நான் கனவு காண்பது உண்டு.				SP
28.	நான் வீட்டில் தனியாக இருக்கப் பயப்படுவேன்.				SP
29.	எனது குடும்பத்தை விட்டுப் பிரிந்திருப்பது எனக்கு விருப்பமில்லை.				SP
30.	எனது பெற்றோருக்கு ஏதாவது தீமை ஏற்படும் என கவலைப்படுகிறேன்.				SP
31.	நன்றாக அறிமுகமில்லாதவர்களோடு இருப்பதை நான் விரும்புவதில்லை.				SC
32.	நன்கு அறிமுகமில்லாதவர்கள் முன் எனக்குப் பதற்றம் ஏற்படும்.				SC
33.	எனக்கு நன்றாக அறிமுகமில்லாதவர்களோடு பேசுவது கடினமாக இருக்கிறது.				SC
34.	எனக்கு நன்றாக அறிமுகமில்லாதவர்களுக்கு முன்னால் நான் கூச்சமடைகிறேன்.				SC
35.	ஏனைய சிறுவர்கள் அல்லது வளர்ந்தோர் முன்னிலை அவர்கள் பார்த்துக் கொண்டிருக்க ஏதாவது செய்து காட்டும் பொழுது எனக்கு பயம் ஏற்படும் (உதாரணமாக:- உரத்து வாசித்தால், பேசுதல், விளையாட்டில் பங்கு பற்றுதல்)				SC
36.	விருந்துகள், நடன நிகழ்ச்சிகள் மற்றும் நன்றாக அறிமுகம் இல்லாதவர்கள் இருக்கும் இடங்களுக்குப் போகும் போது எனக்குப் பயம் ஏற்படும்.				SC
37.	நான் கூச்சப்படும் ஒருவர்.				SC
38.	பாடசாலையில் இருக்கும் பொழுது எனக்கு தலைவலி ஏற்படும்.				SH
39.	நான் பாடசாலையில் இருக்கும் பொழுது வயிற்று				SH

	வலி ஏற்படும்.				
40.	நான் பாடசாலைக்குப் போவது பற்றி கவலைப்படுவேன்.				SH
41.	பாடசாலைக்குப் போக நான் பயப்படுகிறேன்.				SH

**மதிப்பெண்கள்:**

மொத்தப் புள்ளிகள் > 25 ஆயின் அது உளக்கவலை பிறழ்நிலை இருப்பதைக் காண்பிக்கக்கூடும். 30க்கு மேற்பட்ட புள்ளிகள் இதைக் குறித்துரைப்பாகக் காண்பிக்கின்றன.

விடயவகை 1, 6, 9, 15, 19, 22, 24, 27, 30, 34, 38 என்பவற்றுக்கு 7 புள்ளிகள் அதிர்ச்சிப் பயம் சம்பந்தமான பிறழ்வுநிலை அல்லது கணிசமான உடல் அறிகுறிகளைச் சுட்டக்கூடும்.

விடயவகை 5, 7, 14, 21, 23, 28, 33, 35, 37, என்பவற்றுக்கு 9 புள்ளிகள் பொதுமைப்படுத்தப்பட்ட உளக்கவலை பிறழ்வுநிலையைக் குறிக்கக்கூடும்.

விடயவகை 4, 8, 13, 16, 20, 25, 29, 31, என்பவற்றுக்கு 5 புள்ளிகள் பிரிவினால் ஏற்படும் உளக்கவலையை, SOC காட்டக்கூடும்.

விடயவகை 3, 10, 26, 32, 39, 40, 41 என்பவற்றுக்கு 8 புள்ளிகள் சமூக உளக்கவலை பிறழ்வுநிலையைக் காண்பிக்கக்கூடும்.

விடயவகை 2, 11, 17, 36 ஆகியவற்றுக்கு 3 புள்ளிகள் கணிசமான அளவுக்குப் பாடசாலை தவிர்ப்பைக் காட்டக்கூடும்.

8 – 11 வயதிலான சிறுவர்களுக்கு விடயத்தை ஏற்பாடுசெய்வர் சகல வினாக்களையும் விளக்கலாம், அல்லது ஒருவரின் அருகில் அமர்ந்து விளங்காத விடயங்களைக் கேட்டறிந்துகொண்டு வினாக்கொதிதுக்கு விடையளிக்கலாம்.

## APPENDIX-6

### UNIT - I

"பெக்" பரிசோதனைத் தாள்

பெயர்:

தேதி:

1. 0. நான் துக்கமாயிருப்பதில்லை  
1. நான் துக்கமாயிருக்கிறேன்  
2. நான் எப்போதும் துக்கமாயிருக்கிறேன்.  
அதிலிருந்து என்னால் விடுபட முடியவில்லை  
3. நான் தாங்க முடியாத அளவிற்கு துக்கமாயிருக்கிறேன்
2. 0. நான் குறிப்பாக எதிர்காலத்தைப் பற்றி அதேரீயப்படவில்லை  
1. நான் எதிர்காலத்தைப் பற்றி அதேரீயப்படவில்லை  
2. நான் எதிர்நோக்குவதற்கு ஏதும் இல்லாதவனாய் இருப்பதாக உணருகிறேன்  
3. நான் எதிர்காலத்தை நம்பிக்கை இல்லாததும் முன்னேற்றம் அற்ற ஒன்றாகவும் உணர்கிறேன்.
3. 0. வாழ்க்கை எனக்கு தோல்வியாக அமையவில்லை  
1. ஒரு சாதாரண மனிதனைவிட அதிக தோல்விகள் அடைந்துள்ளேன்  
2. என் வாழ்க்கையைத் திரும்பி பார்க்கும்போது அதிகத் தோல்விகளைத் தான் பார்க்கிறேன்  
3. என் வாழ்க்கை முழுவதும் தோல்வியாகத்தான் உள்ளது.
4. 0. நான் வழக்கம்போல் எல்லாவற்றிலும் திருப்தி அடைகின்றேன்  
1. நான் முன்போல் எதையும் ரசிப்பதில்லை  
2. எனக்கு இப்போது எதிலும் முழுத்திருப்தி இல்லை  
3. எல்லாவற்றிலும் நான் அதிருப்தியும் உற்சாகமற்று இருக்கிறேன்
5. 0. நான் குற்ற உணர்வு எப்போதும் அடைவதில்லை  
1. நான் ஒருசில நேரங்களில் குற்ற உணர்வு அடைவதுண்டு  
2. பெருந்பான்மையான நேரங்களில் நான் குற்ற உணர்வு அடைகின்றேன்  
3. நான் எல்லா நேரங்களிலும் குற்ற உணர்வு அடைகின்றேன்
6. 0. நான் தண்டிக்கப்படுவதாக உணரவில்லை  
1. நான் தண்டிக்கப்படலாம் என உணர்கின்றேன்  
2. நான் தண்டிக்கப்படுவேன் என எதிர்பார்க்கின்றேன்  
3. நான் தண்டிக்கப்படுகின்றேன் என்று உணர்கின்றேன்
7. 0. நான் என்னில் ஏமாற்றம் அடைவதாக உணரவில்லை  
1. நான் என்னிடம் ஏமாற்றம் அடைகின்றேன்  
2. நான் என்னிடம் அருவெறுப்பு கொள்கிறேன்  
3. நான் என்னையே வெறுக்கின்றேன்



8.
  0. நான் பிறரைக்காட்டிலும் மோசமானவன் அல்ல என்று உணர்கின்றேன்
  1. என்னுடைய பெலவீனங்களுக்கும் தவறுகளுக்கும் காரணமாக என்னையே நான் நொந்துகொள்கிறேன்
  2. நான் எல்லா நேரமும் என்னுடைய தவறுகளுக்கு என்னையே கடிந்து கொள்கின்றேன்
  3. எல்லா தீய சம்பவங்களுக்கும் என்னையே கடிந்துகொள்கின்றேன்
9.
  0. எனக்கு தற்கொலை செய்துகொள்ளும் எண்ணம் வருவதில்லை
  1. எனக்கு தற்கொலை செய்துகொள்ளும் எண்ணம் வருவதுண்டு; னால் நான் அவ்வாறு செய்யமாட்டேன்
  2. நான் தற்கொலை செய்துகொள்ள விரும்புகின்றேன்
  3. எனக்கு சந்தர்ப்பம் கிடைத்தால் தற்கொலை செய்துகொள்வேன்
10.
  0. நான் வழக்கத்தைவிட அதிகமாக அழுவதில்லை
  1. நான் வழக்கத்தைவிட அதிகமாக அழுகின்றேன்
  2. நான் இப்போதெல்லாம் எந்நேரமும் அழுகிறேன்
  3. என்னால் அழ முடிகிறது; ஆனால் தற்போது அழ நினைத்தாலும் முடிவதில்லை
11.
  0. நான் வழக்கத்தைவிட அதிகம் எரிச்சல் அடைவதில்லை
  1. நான் மிகவும் எளிதாக எரிச்சலும் வெறுப்பும் அடைகிறேன்
  2. தற்போது எந்நேரமும் எரிச்சலும் வெறுப்பும் அடைகிறேன்
  3. முன்பு எவை என்னை எரிச்சலூட்டுமோ அவற்றால் இப்போது நான் எரிச்சல் அடைவதில்லை
12.
  0. நான் மற்ற மக்கள் மீதுள்ள அக்கரையை (விருப்பத்தை) இழக்கவில்லை
  1. நான் முன்பைவிட குறைவான அக்கரையை மற்றவர்கள் மீது கொண்டுள்ளேன்
  2. நான் மற்றவர்கள் மீதுள்ள அக்கரையை அதிக இழந்துவிட்டேன்
  3. நான் மற்றவர்கள் மீதுள்ள அக்கரையை முழுதுமாக இழந்துவிட்டேன்
13.
  0. நான் எப்போதும் போலவே தீர்மானங்களை எடுக்கிறேன்
  1. தீர்மானங்கள் எடுப்பதை முன்னெவிட அதிகமாகத் தள்ளிப்போடுகிறேன்
  2. தீர்மானங்கள் எடுக்க அதிகக் கஷ்டப்படுகிறேன்
  3. ஒரு தீர்மானம் கூட என்னால் எடுக்க முடிவதில்லை

14. 0. நான் என்னை உபயோகமற்றவராகக் கருதுவதில்லை.  
 1. நான் முன்பு போல் பயனுள்ளவராக இப்பொழுது இல்லை.  
 2. நான் மற்றவரோடு ஒப்பிட்டுப் பார்க்கும் பொழுது உபயோகமற்றவராகத் தோன்றுகிறது.  
 3. என்னால் யாருக்கும் எந்த பயனும் இல்லை.
15. 0. நான் எப்பொதும் போல் தெம்பாக இருக்கிறேன்.  
 1. நான் இப்பொழுதெல்லாம் பலம் குறைந்தது போல் உணர்கிறேன்.  
 2. எந்த வேலையையும் சிறப்பாக செய்யும் அளவிற்கு எனக்கு பலமில்லை.  
 3. எந்த வேலையையும் செய்வதற்கே எனக்கு தெம்பில்லை.
16. 0. என்னால் வழக்கம்போல் நன்றாக தூங்க முடிகிறது.  
 1. (a) முன்பை விட அதிகமாக தூங்குகிறேன்.  
 (b) என்னால் முன்பைப்போல் நன்றாக தூங்க முடியவில்லை.  
 2. (a) நான் முன்பை விட மிக அதிகமாக தூங்குகிறேன்.  
 (b) நான் முன்பை விட மிகக் குறைவாக தூங்குகிறேன்.  
 3. (a) நான் பெரும்பாலும் தூங்கிக்கொண்டே இருக்கிறேன்.  
 (b) நான் வழக்கத்தை விட ஒன்று அல்லது இரண்டு மணி நேரங்கள் முன்னதாக விழித்துக் கொள்கிறேன். அதன் பின் மறுபடியும் தூங்கப்போவது கடினமாக உள்ளது.
17. 0. நான் எப்பொழுதும் போல் தான் இருக்கிறேன்.  
 1. நான் முன்பைவிட அதிகமாக எரிச்சலடைகிறேன்.  
 2. நான் முன்பைவிட மிக அதிகமாக எரிச்சலடைகிறேன்.  
 3. நான் எப்பொழுதும் எரிச்சலுடன் தான் இருக்கிறேன்.
18. 0. என்னுடைய பசியில் எந்த மாற்றமும் இல்லை.  
 1. (a) என்னுடைய பசி முன்பைவிட கொஞ்சம் குறைவாக இருக்கிறது.  
 (b) என்னுடைய பசி முன்பைவிட கொஞ்சம் அதிகமாக இருக்கிறது.  
 2. (a) என்னுடைய பசி முன்பைவிட மிகக் குறைவாக இருக்கிறது.  
 (b) என்னுடைய பசி முன்பைவிட மிக அதிகமாக இருக்கிறது.  
 3. (a) எனக்கு பசி என்பதே கிடையாது.  
 (b) எனக்கு அநேக நேரங்களில் சாப்பிட்டே ஆகவேண்டும் என்று தோன்றுகிறது.

19. 0. என்னால் முன்னைப்போலவே கவனமாக வேலை செய்ய முடிகிறது.  
1. என்னால் முன்பு போல் கவனத்துடன் எந்த வேலையையும் செய்ய முடியவில்லை.  
2. என்னால் எந்த வேலையையும் சிறிது நேரத்திற்கு மேல் தொடர்ந்து கவனமாக செய்ய முடியவில்லை.  
3. என்னால் எந்த வேலையையும் கவனத்துடன் செய்யவே முடியவில்லை.
20. 0. நான் வழக்கத்தைவிட அதிகமாக சோர்வு அடைவதில்லை.  
1. நான் முன்பைவிட மிகவும் சீக்கிரத்தில் சோர்வு அடைகிறேன்.  
2. நான் அநேகமாக எதைச் செய்தாலும் சோர்வு அடைகிறேன்.  
3. நான் எதைச் செய்தவற்கும் முடியாத அளவிற்கு சோர்வாயிருக்கிறேன்.
21. 0. பால் உணர்ச்சி (செக்ஸ்) விஜயங்களில் சமீபத்தில் எந்த மாறுதலும் இல்லை.  
1. நான் முன்னைவிட பால் உணர்ச்சி விஜயங்களில் விருப்பம் குறைந்தவனாக உள்ளேன்.  
2. நான் முன்னைவிட பால் உணர்ச்சி விஜயங்களில் அதிக விருப்பம் குறைந்தவனாக உள்ளேன்.  
3. பால் உணர்ச்சி விஜயங்களில் விருப்பமே இல்லை.

## **APPENDIX 7**

### **CONSENT FORM**

I \_\_\_\_\_, hereby give consent to participate in the study conducted by the post graduate in the Department of Psychiatry, Thanjavur Medical College and Hospital, Thanjavur – 613004 and to use my personal data and scores obtained in the questionnaires for the purpose of analysis and to study the prevalence of the disease.

Place :

Date :

Signature the Participant

## **APPENDIX 8**

### **INFORMATION SHEET**

1. We are conducting a cross sectional analytical study on“ANXIETY AND DEPRESSION AMONG SCHOOL GOING ADOLESCENTS IN THANJAVUR: COMPARISONS OF ANXIETY ACROSS GENDER, SCHOOL TYPE, SOCIAL STRATA AND PERCEPTION OF QUALITY TIME SPENT WITH PARENTS”
2. At the time of announcing the results and suggestions, name and identity of the participants will be confidential
3. Taking part in this study is voluntary. You are free to decide whether to participate in this study or withdraw at any time, your decision will not result in any loss of benefits to which you are otherwise entitled.
4. The results of the special study may be intimated to you at the end of the study period or during the study if anything is found abnormal which may aid in the management or treatment

**Signature of the Investigator**

**Signature of Parent/Guardian**

**Date**

## APPENDIX 9

### ஆராய்ச்சி ஒப்புதல் கடிதம்

#### ஆராய்ச்சி தலைப்பு :

வளரிளம் பருவத்திலுள்ள - மாணவ, மாணவியரிடையே மனச்சோர்வு மற்றும் படபடப்பு இருக்கிறதா என்று கண்டறிதல். அவர்களுடைய பெற்றோரின் தன்மை, குடும்ப சூழ்நிலை, தாய் வேலைக்குச் செல்கிறாரா? பெற்றோர் அவர்களுடன் செலவிடும் நேரம் போன்ற தகவல்களை ஒப்பிட்டுப் பார்த்தல்.

பெயர் : தேதி :  
வயது : எண் :  
ஆண் / பெண் : ஆராய்ச்சி சேர்க்கை எண் :

இந்த ஆராய்ச்சியின் விவரங்களும் அதன் நோக்கமும் எனக்குத் தெளிவாக விளக்கப்பட்டது.

எனக்கு விளக்கப்பட்ட விஷயங்களை நான் புரிந்து கொண்டு, நான் எனது சம்மதம் தெரிவிக்கிறேன்.

இந்த ஆராய்ச்சியில் பிறரின் நிர்ப்பந்தமின்றி என் சொந்த விருப்பத்தின் பேரில் நான் பங்கு பெறுகிறேன். மற்றும் இந்த ஆராய்ச்சியிலிருந்து எந்நேரமும் பின்வாங்கலாம் என்பதையும் அதனால் பாதிப்பு ஏற்படாது என்பதையும் நான் புரிந்து கொண்டேன்.

இந்த ஆராய்ச்சியினால் ஏற்படும் நன்மைகள் பற்றி தெளிவாக மருத்துவர் மூலம் தெரிந்து கொண்டேன்.

நான் என்னுடைய சுய நினைவுடன் மற்றும் முழு சுதந்திரத்துடன் இந்த மருந்துவ ஆராய்ச்சியில் என்னைச் சேர்த்துக் கொள்ள சம்மதிக்கிறேன்.

ஆராய்ச்சியாளர் கையொப்பம்

பங்கேற்பாளர்/பெற்றோர் கையொப்பம்

இடம் :

தேதி :

## KEY TO MASTER CHART

1. S.no – Study identity number
2. Age- Age of the participant
3. Sex-Gender of the participant
4. Std- Standard in which the student is studying
5. Medium- Medium of instruction in school (Tamil/English)
6. Family type-Nuclear/Joint

Parental profile

7. Father edu- Educational status of father

----- Not applicable i.e. either father died or the student left  
the column blank

No - Illiterate

Primary- father studied up to 5 th standard

Secondary- father studied up to 12 th standard

Graduate-completed under graduate degree

p.g- completed post graduate degree

8. Father wrk- Father's working nature

No- unemployed

Wages- working for daily wages

Salary- working for monthly salary

Own –self employed

9. Father time- whether father has spent quality time with the participant-  
yes/no

10. Mother edu- Educational Status of mother.

Categorised same as mentioned for father mentioned above( no.7)

11. Mother wrk- working nature of mother.

Categorised same as mentioned for father mentioned above( no.8)

12. Mother time- whether mother has spent quality time with the participant-  
yes/no

13. Both time- whether both parents have spent quality time with the  
participant Yes/no

14. Sharing- whether the participant feel comfortable to share personal issues  
with parents yes/no



15. SES- Socio-economic status of the participant

16. SCARED- total score of the answers marked

17. Anxiety -0= no

1 = mild

2 = present

18. Becks – total score of the answers marked

19. dep - depression yes/no

s no	age	se x	std	mediu m	fam type	Parental profile								SES	SCA RED	anxie ty	BE CK' s	dep
						fathr edu	fathr wrk	fath r tim e	moth r edu	moth r wrk	moth r time	bot h tim e	sha ring					
1	16	m	11	English	nuclear	primary	wages	Yes	secondary	salary	yes	yes	yes	l.middle	19	0	10	no
2	16	m	11	English	nuclear	secondary	salary	Yes	primary	salary	yes	yes	no	l.middle	15	0	15	no
3	16	m	11	English	nuclear	p.g	own	Yes	grad	salary	yes	yes	no	u.middle	41	2	22	no
4	15	m	11	English	nuclear	secondary	salary	Yes	secondary	no	yes	YES	YES	u.middle	21	0	21	no
5	16	m	11	English	nuclear	graduate	own	Yes	secondary	no	yes	yes	no	l.middle	14	0	3	no
6	16	m	11	English	joint	graduate	salary	Yes	graduate	salary	yes	yes	no	upper	19	0	10	no
7	16	m	11	English	nuclear	graduate	no	Yes	graduate	salary	yes	yes	no	u.middle	32	2	17	no
8	15	m	11	English	joint	secondary	salary	Yes	secondary	salary	yes	yes	no	u.middle	17	0	10	no
9	16	m	11	English	nuclear	graduate	salary	Yes	graduate	salary	yes	yes	yes	u.middle	20	0	7	no
10	16	m	11	English	nuclear	graduate	own	Yes	graduate	own	yes	yes	no	u.middle	28	1	24	yes
11	16	m	11	English	nuclear	secondary	salary	Yes	secondary	salary	yes	yes	no	u.middle	40	2	26	yes
12	16	m	11	English	joint	graduate	own	Yes	secondary	no	yes	yes	no	u.middle	27	1	6	no
13	16	m	11	English	nuclear	secondary	wages	Yes	primary	no	yes	yes	yes	u.middle	25	1	10	no
14	16	m	11	English	joint	secondary	wages	Yes	primary	no	yes	yes	no	u.middle	28	1	14	no
15	16	m	11	English	nuclear	graduate	no	Yes	graduate	salary	yes	yes	no	u.middle	17	0	12	no
16	16	m	11	English	nuclear	graduate	salary	Yes	secondary	no	no	no	no	u.middle	18	0	15	no
17	16	m	11	English	nuclear	p.g	salary	No	no	no	no	yes	yes	u.middle	15	0	14	no
18	16	m	11	English	nuclear	graduate	no	No	graduate	no	no	no	no	upper	25	1	23	yes
19	16	m	11	English	nuclear	graduate	salary	no	p.g	salary	yes	no	no	u.middle	24	0	12	no
20	16	m	11	English	nuclear	no	no	Yes	no	no	no	yes	yes	u.middle	39	2	7	no
21	16	m	11	English	nuclear	p.g	salary	Yes	p.g	salary	yes	yes	yes	u.middle	19	0	16	no
22	16	m	11	English	nuclear	primary	own	Yes	no	no	yes	yes	no	u.middle	29	1	13	no

23	16	m	11	English	joint	graduate	own	Yes	p.g	no	yes	yes	no	u.middle	25	1	14	no
24	16	m	11	English	nuclear	graduate	salary	No	secondary	no	yes	yes	yes	u.middle	29	1	19	no
25	16	m	11	English	joint	no	salary	Yes	no	no	yes	no	no	u.middle	15	0	21	no
26	16	m	11	English	nuclear	graduate	salary	No	p.g	salary	yes	yes	yes	upper	17	0	5	no
27	16	m	11	English	joint	graduate	salary	Yes	p.g	salary	no	no	no	upper	22	0	22	no
28	16	m	11	English	nuclear	no	wages	Yes	no	no	yes	yes	no	low	26	1	19	no
29	16	m	11	English	nuclear	primary	own	No	primary	no	yes	yes	no	upper	15	0	13	no
30	16	m	11	English	nuclear	secondary	own	Yes	graduate	no	yes	yes	no	u.middle	10	0	5	no
31	16	m	11	English	joint	graduate	salary	Yes	secondary	no	yes	yes	yes	upper	30	2	9	no
32	16	m	11	English	nuclear	p.g	salary	Yes	p.g	no	yes	yes	no	upper	6	0	12	no
33	16	m	11	English	nuclear	graduate	salary	No	secondary	no	yes	no	yes	u.middle	9	0	12	no
34	16	m	11	English	nuclear	primary	own	No	secondary	no	no	no	no	upper	19	0	15	no
35	16	m	11	English	joint	graduate	no	No	graduate	no	yes	no	no	u.middle	31	2	23	yes
36	16	m	11	English	joint	p.g	own	Yes	graduate	no	yes	yes	no	u.middle	34	2	18	no
37	16	m	11	English	nuclear	p.g	salary	Yes	p.g	no	yes	yes	yes	upper	22	0	27	yes
38	16	m	11	English	nuclear	graduate	own	Yes	graduate	no	yes	yes	yes	upper	20	0	14	no
39	16	m	11	English	joint	graduate	own	No	p.g	no	no	no	no	u.middle	17	0	16	no
40	16	m	11	English	nuclear	p.g	salary	Yes	graduate	no	yes	yes	no	upper	26	1	27	yes
41	15	m	11	English	nuclear	p.g	salary	Yes	graduate	no	yes	yes	no	upper	34	2	20	no
42	17	m	11	English	nuclear	p.g	salary	No	p.g	salary	no	no	no	u.middle	18	0	10	no
43	14	M	9	English	joint	primary	wages	No	primary	no	yes	no	yes	l.middle	26	1	7	no
44	14	M	9	English	joint	secondary	salary	No	graduate	no	yes	no	no	l.middle	27	1	23	yes
45	13	M	9	English	joint	graduate	own	No	graduate	salary	yes	no	no	u.middle	33	2	28	yes
46	13	M	9	English	joint	graduate	own	Yes	no	no	yes	yes	yes	u.middle	50	2	10	no
47	14	M	9	English	joint	primary	wages	Yes	secondary	no	yes	yes	no	l.middle	7	0	2	no
48	14	M	9	English	nuclear	secondary	wages	Yes	primary	no	yes	yes	yes	u.middle	23	0	3	no
49	14	M	9	English	nuclear	secondary	own	Yes	graduate	salary	yes	yes	yes	u.middle	13	0	3	no
50	15	M	9	English	nuclear	p.g	salary	No	p,g	salary	no	no	no	upper	69	2	31	yes
51	13	M	9	English	nuclear	secondary	salary	Yes	secondary	no	yes	yes	no	u.middle	37	2	10	no

52	13	M	9	English	nuclear	no	wages	Yes	p.g	no	yes	yes	no	u.middle	16	0	7	no
53	15	M	9	English	joint	secondary	salary	No	secondary	salary	no	no	no	u.middle	37	2	17	no
54	15	M	9	English	nuclear	secondary	own	Yes	secondary	no	yes	yes	yes	u.middle	18	0	10	no
55	14	M	9	English	joint	secondary	own	Yes	secondary	no	yes	yes	yes	u.middle	19	0	24	yes
56	14	M	9	English	nuclear	secondary	wages	No	primary	no	yes	no	yes	l.middle	21	0	11	no
57	13	M	9	English	joint	graduate	salary	Yes	secondary	no	yes	yes	no	u.middle	39	2	19	no
58	16	M	9	English	joint	secondary	salary	Yes	secondary	no	no	no	no	upper	19	0	5	no
59	13	M	9	English	joint	secondary	salary	Yes	secondary	salary	yes	yes	no	u.middle	42	2	22	no
60	13	M	9	English	joint	secondary	own	No	primary	no	no	no	no	l.middle	8	0	5	no
61	14	M	9	English	joint	-	-	-	graduate	salary	yes	no	yes	u.middle	5	0	0	no
62	14	M	9	English	nuclear	-	-	-	primary	wages	no	no	no	u.middle	8	0	11	no
63	13	M	9	English	nuclear	p.g	salary	Yes	p.g	no	yes	yes	yes	u.middle	20	0	4	no
64	14	M	9	English	nuclear	graduate	salary	Yes	secondary	no	yes	yes	yes	l.middle	40	2	11	no
65	14	M	9	English	nuclear	secondary	salary	Yes	primary	no	no	no	yes	u.middle	32	2	18	no
66	13	M	9	English	nuclear	primary	salary	No	primary	no	no	no	no	u.middle	41	2	15	no
67	14	M	9	English	nuclear	graduate	salary	Yes	secondary	no	yes	yes	yes	u.middle	18	0	2	no
68	14	M	9	English	nuclear	graduate	salary	Yes	secondary	salary	yes	yes	yes	upper	15	0	2	no
69	14	M	9	English	nuclear	no	salary	Yes	secondary	no	yes	yes	no	u.middle	10	0	3	no
70	13	M	9	English	nuclear	p.g	own	Yes	p.g	own	yes	yes	yes	upper	38	2	4	no
71	14	M	9	English	joint	p.g	salary	Yes	p.g	no	yes	yes	no	upper	17	0	8	no
72	14	M	9	English	nuclear	p.g	salary	No	p.g	no	yes	no	no	upper	39	2	9	no
73	13	M	9	English	nuclear	p.g	salary	No	graduate	no	yes	no	yes	upper	43	2	7	no
74	14	M	9	English	nuclear	graduate	salary	Yes	graduate	salary	yes	yes	yes	u.middle	34	2	3	no
75	13	M	9	English	nuclear	p.g	salary	Yes	p.g	salary	yes	yes	no	upper	22	0	11	no
76	14	M	9	English	nuclear	graduate	own	Yes	secondary	no	yes	yes	no	upper	13	0	11	no
77	14	M	9	English	joint	primary	wages	No	secondary	no	yes	no	yes	l.middle	20	0	15	no
78	13	M	9	English	nuclear	primary	salary	No	primary	wages	yes	no	yes	l.middle	33	2	29	yes
79	15	M	9	English	nuclear	secondary	salary	No	secondary	salary	no	no	no	l.middle	32	2	6	no
80	14	M	9	English	nuclear	primary	salary	Yes	no	no	yes	yes	yes	upper	27	1	18	no

81	14	M	9	English	nuclear	secondary	own	Yes	p.g	salary	yes	yes	yes	upper	23	0	24	yes
82	14	M	9	English	nuclear	secondary	own	No	graduate	no	no	no	no	u.middle	21	0	2	no
83	14	M	9	English	nuclear	secondary	own	No	secondary	no	no	no	no	u.middle	7	0	1	no
84	13	M	9	English	nuclear	graduate	own	Yes	graduate	salary	yes	yes	no	upper	11	0	5	no
85	14	M	9	English	nuclear	secondary	salary	No	graduate	salary	no	no	no	u.middle	31	2	11	no
86	14	M	9	English	nuclear	graduate	own	Yes	secondary	no	yes	yes	yes	upper	5	0	5	no
87	14	M	9	English	nuclear	graduate	own	Yes	graduate	no	yes	yes	yes	upper	1	0	3	no
88	14	M	9	English	nuclear	p.g	salary	Yes	graduate	no	yes	yes	no	upper	9	0	3	no
89	13	M	9	English	nuclear	p.g	salary	Yes	graduate	own	yes	yes	yes	upper	7	0	3	no
90	14	F	9	English	nuclear	primary	wages	Yes	primary	no	yes	yes	no	upper	42	2	29	yes
91	14	F	9	English	nuclear	graduate	own	Yes	graduate	no	yes	yes	yes	u.middle	30	2	12	no
92	14	F	9	English	nuclear	graduate	own	No	graduate	no	no	no	no	u.middle	20	0	9	no
93	14	F	9	English	nuclear	-	-	-	secondary	no	yes	no	yes	u.middle	16	0	6	no
94	14	F	9	English	nuclear	secondary	own	Yes	secondary	no	yes	yes	yes	upper	18	0	0	no
95	14	F	9	English	nuclear	p.g	salary	Yes	p.g	salary	yes	yes	no	u.middle	35	2	26	yes
96	14	F	9	English	nuclear	p.g	salary	No	p.g	salary	yes	no	yes	u.middle	39	2	26	yes
97	14	F	9	English	nuclear	p.g	own	No	p.g	salary	yes	no	no	u.middle	20	0	47	yes
98	14	F	9	English	nuclear	no	wages	No	no	no	yes	no	yes	u.middle	21	0	13	no
99	14	F	9	English	nuclear	p.g	salary	Yes	p.g	salary	yes	yes	yes	u.middle	11	0	13	no
100	14	F	9	English	joint	graduate	own	Yes	graduate	no	yes	yes	no	upper	13	0	14	no
101	13	F	9	English	joint	graduate	own	Yes	graduate	no	yes	yes	yes	u.middle	18	0	10	no
102	13	F	9	English	nuclear	p.g	own	Yes	secondary	no	yes	yes	yes	u.middle	26	1	15	no
103	14	F	9	English	joint	graduate	salary	Yes	p.g	salary	yes	yes	yes	u.middle	30	2	17	no
104	13	F	9	English	nuclear	graduate	own	Yes	no	no	yes	yes	yes	u.middle	18	0	16	no
105	13	F	9	English	joint	secondary	salary	Yes	graduate		s	yes	yes	u.middle	22	0	18	no
106	14	F	9	English	nuclear	graduate	own	Yes	p.g	no	yes	yes	no	upper	51	2	35	yes
107	13	F	9	English	nuclear	graduate	own	Yes	p.g	salary	yes	yes	no	upper	39	2	21	no
108	14	F	9	English	nuclear	p.g	salary	No	graduate	no	no	no	no	u.middle	29	1	41	yes
109	14	F	9	English	nuclear	p.g	salary	No	p.g	salary	no	no	yes	u.middle	19	0	14	no

110	13	F	9	English	nuclear	graduate	salary	No	graduate	no	no	no	no	u.middle	31	2	14	no
111	14	F	9	English	nuclear	p.g	salary	No	p.g	salary	yes	no	yes	u.middle	25	1	9	no
112	13	F	9	English	nuclear	p.g	own	Yes	graduate	no	yes	yes	yes	u.middle	13	0	10	no
113	13	F	9	English	nuclear	graduate	salary	No	p.g	no	yes	no	yes	u.middle	28	1	13	no
114	13	F	9	English	nuclear	p.g	salary	Yes	graduate	salary	yes	yes	yes	u.middle	21	0	9	no
115	13	F	9	English	nuclear	p.g	salary	Yes	p.g	salary	yes	yes	yes	u.middle	22	0	7	no
116	14	F	9	English	nuclear	p.g	salary	Yes	secondary	no	yes	yes	yes	u.middle	12	0	11	no
117	14	F	9	English	nuclear	graduate	salary	Yes	no	no	yes	yes	yes	u.middle	13	0	16	no
118	14	F	9	English	nuclear	graduate	salary	Yes	graduate	salary	yes	yes	yes	upper	10	0	13	no
119	14	F	9	English	nuclear	p.g	own	Yes	graduate	own	yes	yes	yes	u.middle	13	0	16	no
120	13	F	9	English	joint	p.g	own	Yes	p.g	no	yes	yes	yes	upper	12	0	16	no
121	14	F	9	English	nuclear	p.g	own	Yes	p.g	no	yes	yes	yes	u.middle	18	0	15	no
122	13	F	9	English	joint	primary	own	Yes	primary	no	yes	yes	no	u.middle	22	0	17	no
123	14	F	9	English	nuclear	p.g	salary	Yes	p.g	no	yes	yes	yes	u.middle	24	0	16	no
124	13	F	9	English	joint	graduate	salary	No	primary	no	yes	no	yes	u.middle	19	0	10	no
125	14	F	9	English	nuclear	graduate	own	Yes	p.g	salary	yes	yes	yes	upper	10	0	4	no
126	14	F	9	English	nuclear	secondary	salary	Yes	graduate	salary	yes	yes	yes	u.middle	15	0	20	no
127	13	F	9	English	joint	graduate	salary	Yes	graduate	no	yes	yes	yes	u.middle	24	0	16	no
128	14	F	9	English	nuclear	p.g	salary	Yes	p.g	no	yes	yes	no	upper	58	2	45	yes
129	14	F	9	English	joint	p.g	salary	Yes	p.g	salary	yes	yes	no	u.middle	53	2	28	yes
130	13	F	9	English	nuclear	graduate	own	Yes	graduate	no	yes	yes	yes	u.middle	19	0	14	no
131	13	F	9	English	nuclear	no	no	No	graduate	no	yes	no	no	u.middle	10	0	13	no
132	14	F	9	English	nuclear	secondary	own	Yes	secondary	no	yes	yes	yes	upper	10	0	11	no
133	13	F	9	English	nuclear	secondary	own	Yes	graduate	no	yes	no	no	u.middle	15	0	6	no
134	14	F	9	English	nuclear	p.g	own	Yes	graduate	no	yes	yes	yes	u.middle	7	0	8	no
135	13	F	9	English	nuclear	graduate	salary	Yes	graduate	no	yes	yes	yes	u.middle	16	0	8	no
136	14	F	9	English	nuclear	primary	own	Yes	secondary	no	yes	yes	yes	u.middle	4	0	0	no
137	13	F	9	English	nuclear	graduate	salary	Yes	graduate	salary	yes	yes	yes	u.middle	17	0	12	no
138	14	F	9	English	nuclear	graduate	salary	No	primary	no	yes	no	no	u.middle	27	1	10	no

139	13	F	9	English	nuclear	primary	salary	No	primary	no	no	no	no	u.middle	34	2	21	no
140	13	F	9	English	nuclear	p.g	salary	Yes	p.g	salary	yes	yes	yes	u.middle	32	2	13	no
141	13	F	9	English	nuclear	no	no	Yes	graduate	salary	no	no	no	u.middle	23	0	18	no
142	13	F	9	English	nuclear	no	no	No	p.g	salary	no	no	no	u.middle	12	0	16	no
143	13	F	9	English	nuclear	graduate	own	No	primary	no	no	no	no	u.middle	23	0	20	no
144	13	F	9	English	joint	p.g	salary	Yes	graduate	no	yes	yes	yes	upper	6	0	8	no
145	13	F	9	English	nuclear	primary	salary	Yes	secondary	no	yes	yes	no	u.middle	10	0	10	no
146	14	F	9	English	joint	graduate	salary	Yes	graduate	no	yes	yes	no	u.middle	13	0	18	no
147	13	F	9	English	joint	graduate	salary	Yes	graduate	salary	yes	yes	yes	u.middle	17	0	19	no
148	13	F	9	English	nuclear	p.g	salary	Yes	graduate	salary	no	no	no	u.middle	7	0	15	no
149	13	F	9	English	joint	graduate	salary	No	graduate	no	yes	no	yes	u.middle	8	0	8	no
150	13	F	9	English	nuclear	graduate	own	No	graduate	no	no	no	no	u.middle	8	0	9	no
151	16	F	11	English	nuclear	p.g	own	No	p.g	salary	yes	no	no	u.middle	34	2	45	yes
152	15	F	11	English	joint	graduate	own	Yes	primary	no	yes	no	no	l.middle	27	1	7	no
153	16	F	11	English	nuclear	graduate	own	Yes	secondary	no	yes	yes	yes	upper	37	2	7	no
154	16	F	11	English	nuclear	primary	wages	No	no	no	no	no	no	u.middle	17	0	3	no
155	15	F	11	English	joint	secondary	salary	Yes	no	no	yes	yes	yes	u.middle	27	1	11	no
156	16	F	11	English	nuclear	secondary	own	Yes	secondary	no	yes	yes	yes	u.middle	42	2	15	no
157	16	F	11	English	joint	graduate	own	Yes	graduate	own	yes	yes	yes	u.middle	20	0	8	no
158	15	F	11	English	nuclear	graduate	salary	No	graduate	no	yes	no	no	low	16	0	25	yes
159	16	F	11	English	nuclear	graduate	salary	No	secondary	no	yes	no	no	u.middle	11	0	21	no
160	16	F	11	English	nuclear	p.g	salary	Yes	p.g	no	yes	yes	yes	u.middle	8	0	4	no
161	15	F	11	English	joint	p.g	own	Yes	graduate	no	yes	yes	yes	u.middle	36	2	29	yes
162	16	F	11	English	joint	p.g	own	Yes	p.g	salary	yes	yes	no	u.middle	29	1	31	yes
163	16	F	11	English	joint	p.g	salary	No	primary	no	yes	no	yes	u.middle	13	0	10	no
164	16	F	11	English	nuclear	graduate	own	Yes	graduate	no	yes	yes	no	u.middle	15	0	21	no
165	16	F	11	English	nuclear	graduate	salary	Yes	graduate	no	yes	yes	yes	u.middle	9	0	10	no
166	17	F	11	English	nuclear	graduate	salary	Yes	graduate	own	yes	yes	no	u.middle	20	0	2	no
167	16	F	11	English	nuclear	p.g	salary	Yes	graduate	salary	yes	yes	no	u.middle	21	0	19	no

168	16	F	11	English	nuclear	graduate	salary	No	graduate	salary	no	no	no	u.middle	22	0	22	no
169	16	F	11	English	nuclear	primary	salary	Yes	secondary	no	yes	yes	no	u.middle	29	1	16	no
170	17	F	11	English	nuclear	graduate	salary	Yes	graduate	no	yes	yes	no	u.middle	25	1	14	no
171	16	F	11	English	nuclear	p.g	salary	Yes	graduate	no	yes	yes	yes	u.middle	33	2	18	no
172	16	F	11	English	nuclear	graduate	salary	Yes	graduate	no	yes	yes	yes	u.middle	14	0	7	no
173	17	F	11	English	nuclear	secondary	own	Yes	no	no	yes	yes	yes	u.middle	30	2	19	no
174	16	F	11	English	nuclear	secondary	wages	Yes	p.g	no	yes	yes	yes	u.middle	52	2	14	no
175	16	F	11	English	nuclear	secondary	own	Yes	primary	no	yes	yes	yes	u.middle	13	0	12	no
176	17	F	11	English	nuclear	graduate	own	Yes	graduate	no	no	no	yes	upper	11	0	10	no
177	16	F	11	English	joint	primary	own	No	primary	no	no	no	no	u.middle	36	2	24	yes
178	16	F	11	English	joint	secondary	wages	No	secondary	salary	yes	no	yes	u.middle	22	0	19	no
179	16	F	11	English	joint	secondary	own	Yes	primary	no	yes	yes	yes	u.middle	14	0	7	no
180	17	F	11	English	nuclear	graduate	salary	No	primary	no	yes	no	yes	u.middle	37	2	10	no
181	15	F	11	English	nuclear	graduate	own	No	secondary	no	yes	no	yes	u.middle	40	2	32	yes
182	16	F	11	English	nuclear	primary	wages	No	primary	no	yes	no	no	u.middle	42	2	31	yes
183	17	F	11	English	nuclear	graduate	own	No	primary	no	yes	no	yes	u.middle	21	0	17	no
184	16	F	11	English	nuclear	p.g	salary	Yes	no	no	yes	yes	yes	upper	29	1	8	no
185	15	F	11	English	nuclear	secondary	salary	Yes	p.g	salary	yes	yes	yes	upper	17	0	8	no
186	15	F	11	English	nuclear	graduate	salary	No	secondary	no	no	no	yes	l.middle	22	0	7	no
187	15	F	11	English	nuclear	p.g	salary	Yes	graduate	no	yes	yes	yes	u.middle	34	2	15	no
188	15	F	11	English	nuclear	p.g	salary	Yes	p.g	salary	yes	yes	no	u.middle	21	0	13	no
189	15	F	11	English	nuclear	p.g	salary	No	no	no	yes	no	yes	u.middle	10	0	8	no
190	15	F	11	English	nuclear	p.g	salary	Yes	p.g	no	yes	yes	yes	u.middle	25	1	11	no
191	16	F	11	English	joint	secondary	salary	No	graduate	salary	yes	no	no	u.middle	32	2	11	no
192	16	F	11	English	nuclear	primary	own	No	primary	own	yes	no	yes	u.middle	11	0	7	no
193	16	F	11	English	joint	secondary	own	Yes	secondary	no	yes	yes	yes	upper	36	2	6	no
194	16	F	11	English	nuclear	primary	own	Yes	primary	no	yes	yes	yes	upper	28	2	7	no
195	16	F	11	English	nuclear	graduate	wages	Yes	graduate	no	yes	yes	yes	u.middle	16	0	12	no
196	15	F	11	English	joint	graduate	salary	Yes	secondary	no	yes	yes	yes	u.middle	39	2	8	no



197	13	F	9	Tamil	joint	primary	salary	Yes	primary	salary	yes	yes	yes	l.middle	34	2	14	no
198	14	F	9	Tamil	nuclear	secondary	salary	Yes	secondary	wages	yes	yes	yes	l.middle	30	2	13	no
199	14	F	9	Tamil	nuclear	no	no	No	primary	salary	yes	no	yes	low	9	0	7	no
200	13	F	9	Tamil	joint	primary	wages	No	secondary	no	no	no	no	u.middle	37	2	7	no
201	14	F	9	Tamil	joint	p.g	salary	No	secondary	no	yes	no	yes	l.middle	50	2	12	no
202	13	F	9	Tamil	nuclear	secondary	wages	No	primary	no	yes	no	yes	u.middle	27	1	8	no
203	13	F	9	Tamil	nuclear	no	no	Yes	no	wages	yes	yes	yes	low	40	2	16	no
204	14	F	9	Tamil	nuclear	primary	own	Yes	no	own	yes	yes	yes	l.middle	35	2	38	yes
205	13	F	9	Tamil	joint	p.g	salary	Yes	secondary	no	yes	yes	no	l.middle	34	2	22	no
206	13	F	9	Tamil	nuclear	primary	wages	No	secondary	no	yes	no	yes	u.middle	45	2	23	yes
207	14	F	9	Tamil	nuclear	secondary	salary	Yes	primary	salary	yes	yes	yes	u.middle	45	2	17	no
208	13	F	9	Tamil	nuclear	primary	salary	No	secondary	no	yes	no	yes	l.middle	44	2	17	no
209	13	F	9	Tamil	nuclear	primary	salary	No	secondary	salary	no	no	no	u.middle	54	2	29	yes
210	13	F	9	Tamil	nuclear	primary	wages	No	primary	wages	no	no	no	l.middle	33	2	12	no
211	14	F	9	Tamil	nuclear	secondary	wages	No	primary	no	yes	no	yes	l.middle	47	2	17	no
212	13	F	9	Tamil	nuclear	primary	wages	No	primary	wages	yes	no	yes	l.middle	29	1	28	yes
213	13	F	9	Tamil	nuclear	primary	wages	No	no	wages	yes	no	yes	l.middle	30	2	28	yes
214	13	F	9	Tamil	nuclear	primary	salary	Yes	primary	wages	yes	yes	yes	l.middle	28	1	11	no
215	13	F	9	Tamil	nuclear	no	salary	No	primary	no	yes	no	no	u.middle	23	0	7	no
216	14	F	9	Tamil	nuclear	secondary	salary	No	primary	no	yes	no	yes	l.middle	36	2	26	yes
217	13	F	9	Tamil	nuclear	secondary	no	No	p.g	salary	yes	no	yes	l.middle	37	2	27	yes
218	13	F	9	Tamil	nuclear	p.g	no	No	no	salary	yes	no	yes	l.middle	38	2	17	no
219	14	F	9	Tamil	nuclear	primary	own	Yes	primary	no	yes	yes	no	u.middle	30	2	23	yes
220	13	F	9	Tamil	nuclear	primary	wages	No	secondary	salary	yes	no	yes	l.middle	16	0	5	no
221	13	F	9	Tamil	nuclear	primary	own	No	secondary	salary	yes	no	yes	u.middle	17	0	21	yes
222	14	F	9	Tamil	nuclear	primary	own	Yes	primary	wages	yes	no	yes	u.middle	43	2	20	no
223	13	F	9	Tamil	nuclear	secondary	salary	Yes	secondary	own	yes	yes	no	l.middle	38	2	12	no
224	13	F	9	Tamil	nuclear	no	wages	No	no	no	yes	no	yes	u.middle	34	2	13	no
225	14	F	9	Tamil	nuclear	p.g	salary	Yes	secondary	no	yes	no	yes	u.middle	11	0	10	no

226	13	F	9	Tamil	nuclear	secondary	salary	No	secondary	salary	yes	no	no	u.middle	24	0	19	no
227	13	F	9	Tamil	nuclear	secondary	salary	No	secondary	salary	yes	no	yes	l.middle	23	0	7	no
228	14	F	9	Tamil	nuclear	primary	salary	No	primary	salary	yes	no	no	u.middle	32	2	19	no
229	13	F	9	Tamil	nuclear	primary	salary	No	p.g	salary	yes	no	no	u.middle	32	2	19	no
230	13	F	9	Tamil	nuclear	primary	wages	No	primary	no	yes	no	no	u.middle	39	2	17	no
231	13	F	9	Tamil	nuclear	secondary	-	-	secondary	salary	yes	no	yes	l.middle	20	0	3	no
232	14	F	9	Tamil	joint	-	-	No	primary	wages	yes	no	no	l.middle	19	0	2	no
233	13	F	9	Tamil	nuclear	p.g	no	No	primary	wages	no	no	no	low	32	2	28	yes
234	13	F	9	Tamil	nuclear	no	wages	No	secondary	no	yes	no	no	l.middle	35	2	10	no
235	14	F	9	Tamil	joint	no	wages	Yes	no	wages	yes	yes	yes	l.middle	64	2	44	yes
236	14	F	9	Tamil	nuclear	no	own	No	no	wages	yes	yes	yes	low	31	2	20	no
237	13	F	9	Tamil	joint	secondary	wages	Yes	-	-	-	no	no	low	19	0	12	no
238	13	F	9	Tamil	nuclear	-	-	-	-	-	-	-	-	Upper	13	0	5	no
239	14	F	9	Tamil	nuclear	primary	salary	Yes	primary	no	yes	yes	yes	u.middle	45	2	17	no
240	13	F	9	Tamil	nuclear	secondary	no	Yes	no	no	yes	no	yes	l.middle	36	2	15	no
241	13	F	9	Tamil	nuclear	no	salary	Yes	primary	no	yes	yes	yes	l.middle	34	2	20	no
242	13	F	9	Tamil	joint	primary	salary	Yes	secondary	no	yes	yes	yes	l.middle	32	2	33	yes
243	13	F	9	Tamil	nuclear	secondary	own	Yes	primary	no	yes	yes	yes	l.middle	21	0	12	no
244	13	F	9	Tamil	nuclear	primary	wages	Yes	no	no	no	no	no	low	42	2	19	no
245	13	F	9	Tamil	joint	secondary	salary	Yes	graduate	no	yes	yes	yes	l.middle	41	2	9	no
246	13	F	9	Tamil	nuclear	primary	salary	Yes	primary	no	yes	yes	yes	low	45	2	22	no
247	16	F	11	Tamil	nuclear	secondary	wages	Yes	no	wages	yes	yes	yes	l.middle	11	0	13	no
248	17	F	11	Tamil	joint	no	wages	Yes	no	salary	yes	yes	no	l.middle	30	2	14	no
249	16	F	11	Tamil	nuclear	primary	wages	Yes	primary	salary	yes	yes	yes	l.middle	26	2	9	no
250	17	F	11	Tamil	nuclear	no	wages	Yes	secondary	wages	yes	yes	yes	l.middle	39	2	30	yes
251	16	F	11	Tamil	nuclear	secondary	wages	Yes	graduate	no	yes	yes	yes	l.middle	24	0	17	no
252	15	F	11	Tamil	nuclear	secondary	own	No	primary	no	yes	no	yes	u.middle	35	2	24	yes
253	17	F	11	Tamil	nuclear	secondary	own	No	secondary	no	no	no	no	u.middle	51	2	27	yes
254	16	F	11	Tamil	nuclear	primary	wages	Yes	primary	no	yes	yes	yes	l.middle	46	2	16	no

255	16	F	11	Tamil	nuclear	no	wages	no	primary	no	yes	no	yes	l.middle	50	2	27	yes
256	15	F	11	Tamil	nuclear	secondary	salary	yes	primary	no	yes	yes	yes	upper	68	2	23	yes
257	16	F	11	Tamil	nuclear	-	-	-	no	wages	yes	no	yes	low	29	1	4	no
258	16	F	11	Tamil	nuclear	primary	wages	no	-	-	-	no	no	low	28	1	10	no
259	15	F	11	Tamil	joint	secondary	salary	no	primary	wages	no	no	no	low	12	0	14	no
260	16	F	11	Tamil	nuclear	primary	wages	no	primary	no	yes	no	yes	l.middle	38	2	20	no
261	16	F	11	Tamil	nuclear	primary	wages	no	primary	wages	yes	no	no	u.middle	31	2	14	no
262	15	F	11	Tamil	nuclear	secondary	salary	yes	primary	no	yes	yes	yes	low	32	2	12	no
263	16	F	11	Tamil	joint	secondary	salary	no	secondary	salary	yes	no	yes	l.middle	30	2	11	no
264	15	F	11	Tamil	nuclear	primary	wages	no	secondary	no	yes	no	yes	u.middle	30	2	4	no
265	16	F	11	Tamil	nuclear	primary	salary	yes	-	-	-	no	yes	low	19	0	7	no
266	15	F	11	Tamil	joint	primary	salary	no	primary	salary	no	no	no	u.middle	31	2	8	no
267	16	F	11	Tamil	joint	-	-	-	primary	salary	yes	no	yes	l.middle	39	2	8	no
268	16	F	11	Tamil	nuclear	-	-	-	no	salary	yes	no	yes	low	52	2	19	no
269	16	F	11	Tamil	nuclear	-	-	-	secondary	salary	yes	no	no	l.middle	35	2	28	yes
270	15	F	11	Tamil	joint	primary	salary	no	primary	no	no	no	no	l.middle	35	2	15	no
271	16	F	11	Tamil	nuclear	-	-	-	primary	salary	yes	no	yes	u.middle	16	0	27	yes
272	15	F	11	Tamil	nuclear	secondary	wages	yes	graduate	salary	yes	yes	yes	l.middle	28	1	11	no
273	16	F	11	Tamil	joint	primary	wages	yes	secondary	no	yes	yes	yes	l.middle	8	0	1	no
274	16	F	11	Tamil	joint	primary	own	yes	primary	no	no	no	no	u.middle	40	2	9	no
275	15	F	11	Tamil	nuclear	primary	wages	no	no	no	no	no	no	l.middle	37	2	20	no
276	17	F	11	Tamil	nuclear	primary	salary	yes	no	no	yes	yes	yes	l.middle	43	2	17	no
277	15	F	11	Tamil	nuclear	-	-	-	primary	salary	yes	no	no	l.middle	39	2	15	no
278	15	F	11	Tamil	nuclear	primary	wages	yes	primary	wages	yes	yes	no	l.middle	37	2	26	yes
279	15	F	11	Tamil	nuclear	primary	wages	yes	primary	no	yes	yes	no	u.middle	31	2	18	no
280	16	F	11	Tamil	nuclear	primary	wages	no	primary	no	yes	no	yes	low	22	0	9	no
281	15	F	11	Tamil	joint	-	-	-	primary	salary	yes	no	yes	l.middle	45	2	25	yes
282	15	F	11	Tamil	joint	primary	own	yes	primary	own	yes	yes	no	u.middle	39	2	15	no
283	14	F	11	Tamil	joint	primary	own	yes	primary	salary	yes	yes	no	u.middle	38	2	15	no

284	16	F	11	Tamil	nuclear	-	-	-	secondary	salary	yes	no	yes	low	10	0	5	no
285	17	F	11	Tamil	nuclear	primary		no	primary	no	no	no	no	u.middle	42	2	12	no
286	16	F	11	Tamil	joint	secondary	wages	yes	primary	no	yes	yes	yes	l.middle	38	2	16	no
287	17	F	11	Tamil	nuclear	secondary	salary	yes	secondary	no	yes	yes	yes	u.middle	42	2	17	no
288	16	F	11	Tamil	nuclear	secondary	salary	yes	secondary	no	yes	yes	yes	l.middle	45	2	17	no
289	16	F	11	Tamil	nuclear	primary	wages	yes	primary	wages	yes	yes	yes	low	38	2	8	no
290	16	F	11	Tamil	nuclear	no	salary	yes	secondary	no	yes	yes	yes	low	17	0	7	no
291	15	F	11	Tamil	nuclear	no	wages	yes	no	salary	yes	yes	yes	l.middle	7	0	11	no
292	16	F	11	Tamil	joint	primary	wages	yes	primary	no	yes	yes	yes	l.middle	25	2	14	no
293	17	F	11	Tamil	nuclear	primary	wages	no	primary	no	no	no	no	l.middle	28	2	12	no
294	16	m	9	Tamil	nuclear	primary	wages	no	primary	wages	no	no	yes	l.middle	34	2	20	no
295	15	m	9	Tamil	nuclear	secondary	wages	no	secondary	no	yes	no	no	l.middle	14	0	7	no
296	15	m	9	Tamil	nuclear	primary	wages	yes	primary	no	yes	yes	no	l.middle	18	0	17	no
297	15	m	9	Tamil	nuclear	secondary	own	yes	secondary	no	yes	yes	no	l.middle	20	0	8	no
298	15	m	9	Tamil	nuclear	primary	wages	no	primary	no	no	no	no	low	33	2	28	yes
299	14	m	9	Tamil	nuclear	-	-	-	no	own	no	no	no	l.middle	30	2	27	yes
300	16	m	9	Tamil	nuclear	no	salary	yes	primary	wages	yes	yes	no	l.middle	26	1	11	no
301	16	m	9	Tamil	nuclear	primary	salary	yes	primary	salary	yes	yes	yes	l.middle	20	0	15	no
302	15	m	9	Tamil	nuclear	primary	salary	yes	primary	wages	yes	yes	yes	l.middle	22	0	6	no
303	15	m	9	Tamil	nuclear	primary	wages	yes	primary	no	yes	yes	no	u.middle	38	2	19	no
304	14	m	9	Tamil	nuclear	secondary	wages	yes	primary	wages	yes	yes	no	low	17	0	10	no
305	15	m	9	Tamil	nuclear	primary	wages	no	primary	no	no	no	no	low	33	2	17	no
306	16	m	9	Tamil	nuclear	primary	own	no	no	no	no	no	no	low	24	0	12	no
307	15	m	9	Tamil	nuclear	primary	wages	yes	primary	wages	yes	yes	no	low	31	2	17	no
308	14	m	9	Tamil	nuclear	secondary	wages	yes	primary	no	yes	yes	no	u.middle	28	1	17	no
309	14	m	9	Tamil	nuclear	secondary	wages	yes	primary	no	yes	yes	no	l.middle	26	1	6	no
310	14	m	9	Tamil	nuclear	-	-	-	primary	salary	no	no	no	low	39	2	32	yes
311	14	m	9	Tamil	nuclear	secondary	salary	yes	primary	no	yes	yes	no	l.middle	24	0	10	no
312	14	m	9	Tamil	nuclear	primary	salary	yes	primary	no	yes	yes	yes	low	33	2	7	no

313	14	m	9	Tamil	nuclear	no	wages	no	primary	wages	yes	no	no	low	24	0	10	no
314	13	m	9	Tamil	nuclear	secondary	wages	yes	secondary	no	yes	yes	no	l.middle	48	2	19	no
315	14	m	9	Tamil	nuclear	secondary	wages	yes	secondary	no	yes	yes	no	u.middle	28	1	11	no
316	13	m	9	Tamil	nuclear	primary	wages	no	primary	no	yes	no	no	l.middle	30	2	25	yes
317	14	m	9	Tamil	nuclear	secondary	wages	no	secondary	wages	no	no	no	l.middle	6	0	1	no
318	15	m	9	Tamil	nuclear	primary	own	no	secondary	salary	no	no	no	low	18	0	5	no
319	13	m	9	Tamil	nuclear	primary	own	yes	primary	no	yes	yes	yes	l.middle	28	1	13	no
320	15	m	9	Tamil	nuclear	primary	salary	no	secondary	no	no	no	no	low	33	2	11	no
321	13	m	9	Tamil	nuclear	primary	wages	yes	primary	no	yes	yes	no	low	24	0	8	no
322	15	m	9	Tamil	nuclear	primary	salary	yes	primary	no	yes	yes	no	l.middle	11	0	2	no
323	14	m	9	Tamil	nuclear	primary	wages	yes	primary	no	yes	yes	no	l.middle	19	0	10	no
324	14	m	9	Tamil	nuclear	primary	wages	yes	no	no	yes	yes	no	low	31	2	20	no
325	14	m	9	Tamil	joint	secondary	own	yes	secondary	no	yes	yes	no	u.middle	12	0	6	no
326	13	m	9	Tamil	joint	secondary	wages	yes	primary	no	yes	yes	no	l.middle	30	2	16	no
327	14	m	9	Tamil	nuclear	primary	wages	yes	primary	no	yes	yes	no	low	32	2	18	no
328	14	m	9	Tamil	nuclear	primary	own	yes	secondary	no	yes	yes	no	u.middle	19	0	15	no
329	13	m	9	Tamil	nuclear	primary	own	yes	primary	no	yes	yes	no	l.middle	24	0	10	no
330	14	m	9	Tamil	nuclear	primary	own	yes	secondary	own	yes	yes	no	l.middle	23	0	10	no
331	14	m	9	Tamil	joint	no	no	no	primary	wages	no	no	no	l.middle	28	1	4	no
332	14	m	9	Tamil	nuclear	primary	wages	yes	no	wages	yes	yes	no	low	20	0	9	no
333	13	m	9	Tamil	nuclear	primary	wages	no	primary	salary	no	no	no	l.middle	38	2	7	no
334	14	m	9	Tamil	nuclear	primary	salary	no	primary	wages	no	no	no	l.middle	34	2	4	no
335	14	m	9	Tamil	nuclear	no	wages	no	no	wages	yes	no	no	low	20	0	9	no
336	14	m	9	Tamil	joint	primary	wages	no	primary	no	yes	no	no	l.middle	15	0	8	no
337	13	m	9	Tamil	joint	primary	own	yes	secondary	no	yes	yes	no	l.middle	5	0	2	no
338	14	m	9	Tamil	joint	primary	own	yes	no	no	yes	yes	no	l.middle	9	0	3	no
339	13	m	9	Tamil	joint	primary	wages	yes	no	no	yes	yes	no	l.middle	4	0	7	no
340	16	M	11	Tamil	nuclear	primary	wages	yes	primary	no	yes	yes	yes	u.middle	24	0	17	no
341	16	M	11	Tamil	joint	no	wages	no	no	no	yes	no	yes	l.middle	42	2	47	no

342	16	M	11	Tamil	nuclear	primary	no	no	primary	no	no	no	no	low	6	0	9	no
343	16	M	11	Tamil	nuclear	primary	own	yes	primary	no	yes	yes	no	u.middle	12	0	14	no
344	16	M	11	Tamil	nuclear	primary	wages	no	primary	no	yes	no	no	l.middle	31	2	11	no
345	15	M	11	Tamil	nuclear	no	wages	yes	primary	salary	yes	yes	no	u.middle	17	0	4	no
346	16	M	11	Tamil	nuclear	graduate	wages	no	secondary	no	yes	no	no	low	14	0	9	no
347	16	M	11	Tamil	nuclear	primary	salary	no	no	no	no	no	no	l.middle	28	1	25	yes
348	16	M	11	Tamil	nuclear	primary	wages	yes	graduate	no	yes	yes	no	u.middle	11	0	8	no
349	16	M	11	Tamil	nuclear	primary	own	no	primary	no	yes	no	no	u.middle	24	0	21	no
350	16	M	11	Tamil	nuclear	-	-	-	secondary	salary	no	no	no	low	17	0	17	no
351	16	M	11	Tamil	joint	-	-	-	secondary	no	no	no	no	u.middle	10	0	10	no
352	16	M	11	Tamil	nuclear	secondary	own	yes	primary	no	yes	no	no	u.middle	22	0	4	no
353	15	M	11	Tamil	nuclear	primary	wages	no	primary	no	no	no	no	low	21	0	7	no
354	16	M	11	Tamil	nuclear	p.g	own	yes	p.g	own	yes	yes	no	u.middle	5	0	2	no
355	16	M	11	Tamil	nuclear	primary	salary	yes	primary	no	yes	yes	yes	u.middle	28	1	23	yes
356	17	M	11	Tamil	nuclear	p.g	wages	no	primary	no	no	no	no	u.middle	6	0	8	no
357	16	M	11	Tamil	nuclear	secondary	wages	no	primary	wages	no	no	no	low	24	0	10	no
358	17	M	11	Tamil	nuclear	secondary	wages	yes	primary	no	yes	yes	no	l.middle	14	0	5	no
359	16	M	11	Tamil	nuclear	primary	own	yes	primary	no	yes	yes	no	l.middle	15	0	6	no
360	17	M	11	Tamil	nuclear	primary	salary	yes	primary	no	yes	yes	no	low	9	0	8	no
361	16	M	11	Tamil	nuclear	no	wages	no	primary	no	yes	no	no	l.middle	23	0	10	no
362	17	M	11	Tamil	nuclear	no	wages	yes	primary	wages	yes	yes	no	low	33	2	16	no
363	17	M	11	Tamil	nuclear	primary	salary	yes	primary	no	yes	yes	no	u.middle	30	2	11	no
364	16	M	11	Tamil	nuclear	primary	own	yes	primary	own	yes	yes	no	low	15	0	5	no
365	16	M	11	Tamil	nuclear	secondary	wages	no	secondary	no	yes	no	no	u.middle	10	0	2	no
366	15	M	11	Tamil	nuclear	primary	own	yes	no	wages	yes	yes	yes	low	24	0	17	no
367	16	M	11	Tamil	nuclear	primary	wages	yes	primary	no	yes	yes	yes	low	12	0	4	no
368	16	M	11	Tamil	nuclear	secondary	own	yes	secondary	no	yes	yes	no	u.middle	14	0	0	no
369	17	M	11	Tamil	joint	graduate	salary	yes	secondary	no	yes	yes	no	u.middle	4	0	0	no
370	15	M	11	Tamil	nuclear	-	-	-	secondary	salary	no	no	no	low	15	0	16	no

371	15	M	11	Tamil	nuclear	secondary	wages	no	no	no	no	no	no	u.middle	14	0	2	no
372	15	M	11	Tamil	nuclear	secondary	own	yes	primary	salary	yes	yes	no	l.middle	13	0	6	no
373	16	M	11	Tamil	joint	graduate	wages	yes	-	-	-	no	yes	u.middle	9	0	2	no
374	16	M	11	Tamil	nuclear	p.g	salary	yes	p.g	salary	yes	yes	yes	u.middle	23	0	11	no
375	17	M	11	Tamil	nuclear	primary	wages	yes	primary	no	yes	yes	no	low	8	0	1	no
376	16	M	11	Tamil	nuclear	primary	wages	yes	primary	no	yes	yes	no	low	16	0	11	no
377	16	M	11	Tamil	joint	primary	no	yes	primary	no	yes	yes	no	low	12	0	1	no
378	15	M	11	Tamil	nuclear	primary	wages	no	primary	no	no	no	no	low	24	0	9	no
379	16	M	11	Tamil	nuclear	primary	wages	yes	primary	no	yes	yes	no	u.middle	14	0	6	no
380	16	M	11	Tamil	nuclear	primary	salary	yes	primary	no	yes	yes	no	u.middle	19	0	3	no
381	15	M	11	Tamil	joint	secondary	wages	yes	graduate	salary	yes	yes	no	u.middle	9	0	8	no
382	15	M	11	Tamil	nuclear	no	wages	no	no	wages	no	no	no	low	31	2	29	yes
383	15	M	11	Tamil	nuclear	primary	salary	yes	no	wages	yes	yes	no	low	13	0	8	no
384	15	M	11	Tamil	nuclear	no	wages	yes	no	salary	yes	yes	no	low	24	0	17	no
385	16	M	11	Tamil	nuclear	no	wages	no	primary	no	yes	no	no	low	9	0	3	no
386	16	M	11	Tamil	joint	primary	no	no	primary	own	yes	no	no	low	16	0	6	no
387	17	M	11	Tamil	joint	-	-	-	secondary	wages	yes	no	yes	u.middle	18	0	18	no
388	15	M	11	Tamil	nuclear	primary	wages	no	primary	wages	no	no	no	low	35	2	28	yes
389	16	M	11	Tamil	joint	graduate	salary	yes	primary	no	yes	yes	yes	u.middle	6	0	1	no
390	15	M	11	Tamil	nuclear	primary	wages	no	primary	no	no	no	no	l.middle	24	0	15	no
391	17	M	11	Tamil	nuclear	primary	salary	yes	primary	no	yes	yes	no	l.middle	22	0	13	no